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The Journal of General Education

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Editorial Comment

THREE YEARS ago this spring, Earl J. McGrath, then Dean of the College of Liberal Arts at the State University of Iowa, began the work of initiating this *Journal*. In the first number, Mr. McGrath, as editor, stated that the *Journal* would "present the opinions of those who have considered the philosophies and social implications" of general education, as well as "descriptions of the practical experiences of those who have devised new courses of study or attempted innovations in teaching." The editor wisely added that the *Journal* would publish articles representing "widely varying and sometimes conflicting educational philosophies."

In the autumn of 1948, while engaged in making a report to the Carnegie Foundation for the Advancement of Teaching on various programs of general education, Mr. McGrath resigned his deanship at Iowa and became Professor of Higher Education at the University of Chicago. He continued his editorship of this *Journal* until President Truman appointed him United States Commissioner of Education in March. The responsibility for the editing of the *Journal* was assumed by a Chicago faculty group.* Clarence H. Faust, Dean of Humanities and Science at Stanford University and onetime (1941–46) Dean of the College at Chicago, and Reginald F. Arragon, Professor of History and Chairman of the Humanities at Reed College, joined the Board of Editorial Consultants, as did Commissioner McGrath.

Mr. McGrath has written the Editor:

> I am glad to learn from the central administration of the University of Chicago that the *Journal of General Education* which I have edited for the past three years will be continued under the auspices of that institution. I am sorry that my leaving requires me to relinquish the editorship, but I feel confident that the future of the *Journal* is secure at the University of Chicago.
>
> Over the past three years there has been a steady development in interest in this publication and there are many manifestations of its growing value to educators generally. It is of particular value of course to those who have responsibility for developing programs of general education. I am sure that the *Journal* will continue to serve a very valuable function in the various educational institutions of this country.

Let it be said here that the quarterly publication of a journal devoted to general education requires thinking and writing by a substantial number of persons in all parts of the United States. The challenge which prompts the Chicago editorial group to continue the work which Mr. McGrath so ably began is the same one which prompts them and their colleagues in all colleges and universities to try to define and devise educational programs from which all citizens of this democracy may profit. As the new Commissioner of Education said in one of his first speeches after assuming office:

> Educating our youth for responsible citizenship is perhaps the most difficult but most important problem before us as educators. Almost anyone can visualize the importance of the doctor or the engineer to our society. Our professions and our vocations have a tangible quality to them. It takes, however, great imagination to discover the elements which go to make up the responsible citizen and to discover practicable ways in which democracy can become a more dynamic element in the lives of our youth. If we are to continue to live in freedom, it is essential that together we learn how to meet this problem.

The *Journal of General Education* is a medium in which various approaches to this ever continuing task can be discussed. The Editors believe that there should be a wide variety of articles in the *Journal*. Since any program of education rests on a philosophy, it follows that various philosophies of education will be explicated in the columns of the *Journal*. These will be discussed; controversy will be welcomed.

Since wise faculty members know that theirs are not the only ways to solve the problems of general education, it follows that they will be interested in the means which others are employing to solve the same problems.

* Beginning with this issue, the *Journal* will be published at the University of Chicago Press. Correspondence about subscriptions should be addressed to the Press.

The *Journal* will continue to serve as a place where the reader can expect to find well-written accounts of significant educational experiments in the field of general education.

The *Journal* will provide a place where good discussions of education from past generations—not readily available—will be reprinted. Readers should not be surprised, therefore, if John Stuart Mill's *Inaugural Address at St. Andrews*, delivered in 1867, appears in the *Journal*, preferably with a commentary by one of the eighteen hundred college or university presidents in the United States.

The *Journal* will also welcome articles relating to the teaching of specific texts. Thus, if Harry Levin, at Harvard, thinks he has done a first-rate job teaching James Joyce's *Portrait of the Artist as a Young Man*, the *Journal* wants an article—not telling about it but demonstrating it by an exemplary article. If Max Savelle, at the University of Washington, has done Tom Paine's *Common Sense* to a "T," there should be an article in these pages. Related to those suggestions would be another kind of article. College teachers often do significant creative work in the preparation of lectures, particularly for general courses in programs of liberal education. According to one school of thought, these lectures, once given, probably should not be given again. But, if a lecture is good and would contribute to thinking on general education, it might well be considered for this *Journal*. Professor Kroeber's article in this issue is the kind of lecture which should see the light of print.

The paragraphs above indicate, at least partially, what kind of periodical the *Journal of General Education* will seek to be. The Editors do not believe that there is a single content for general education. They do subscribe, however, to the idea that those responsible for general education should seek a conception of their work which takes direct and systematic account of our common humanity and which gives priority to the "vocation of man" over all special vocations. Education for freedom, education for citizenship in our democracy—these are vitally important. But conceptions of general education must encompass *the means of preparation* of all men and women to take part in those disciplined activities which are appropriate to human nature and central for human life.

Sir Walter Moberly concludes his stimulating discussion of the present ailments of higher education in this issue of the *Journal* with the devastating accusation that students today "are not incited to disentangle and examine critically the assumptions and emotional attitudes underlying the particular studies they pursue, the profession for which they are preparing, the ethical judgments they are accustomed to make, and the political or religious convictions they hold." Sir Walter is a qualified observer; he knows British universities well; and few readers will challenge the application of his comments to American students. Parenthetically, it may be of interest to quote the "terms of reference" under which the British University Grants Committee, of which Sir Walter Moberly is chairman, operates:

> To enquire into the financial needs of university education in Great Britain; to advise the Government as to the application of any grants made by Parliament towards meeting them; to collect, examine and make available information on matters relating to university education at home and abroad; and to assist, in consultation with the universities and other bodies concerned, the preparation and execution of such plans for the development of the universities as may from time to time be required in order to ensure that they are fully adequate to national needs.

In practice, this committee of sixteen determines the disposition of the government subsidy to higher education in Great Britain.

Chancellor Hutchins, in his article, addresses himself to a statement of what the college can and cannot do; he argues that the colleges have an intellectual task. This concept of general education is dealt with in Angel Quintero's article, "A Theory of General Education." Mr. Quintero's treatment is of special interest because he has written a general philosophical statement having in mind the particular problems of education in Puerto Rico. Professor Alfred Garrett, a chemist, sets down in his article, "Science and the Liberal Arts," the conditions under which he feels a science program should be developed. C. R. Pace contributes a discussion of attitudes toward activities pertaining to the duties of citizenship on the part of college graduates. Benjamin Bloom and Jane Allison discuss the problem of the proper placement of college students in a program of studies, and Hugh Stickler gives a report on a year's work in building a new program at Florida State University.

Communications and manuscripts are invited.

REUBEN FRODIN

*Some Causes of Our Present Discontent**

SIR WALTER MOBERLY†

WE HAVE had the Classical-Christian university, which was later displaced by the Liberal university. This in turn has been undermined, but not as yet superseded, by the combined influence of democratization and technical achievement. What we have, in fact, to-day is the chaotic university.

I. SHIRKING OF FUNDAMENTAL ISSUES

Broadly speaking, the university to-day is not asking the really fundamental questions. In particular there has been something like a taboo on the treatment of contentious issues of politics or religion. Sometimes this has been statutory, but more often it has rested on a generally accepted convention. It seems to have been due partly to historical causes and partly to a national idiosyncrasy. Thus the coolness and indifference of the eighteenth century were a natural reaction from the fanaticism of the seventeenth. In this country, the ethos of Walpole replaced the ethos of Cromwell and has maintained itself ever since. The wars of religion had been ferocious and divisive; they served as a warning. In retrospect they seemed to have produced much heat and little light. Civil peace was now preserved by a tacit agreement not to differ on ultimate questions or rather by a prudential disposition to let sleeping dogs lie; and it was in this ethos that the modern universities grew up. They were also influenced by a reaction from the intrusion of ecclesiastical considerations into a field where they were felt to be not only embittering but irrelevant, and by a recollection of the days when winning or keeping a chair in any faculty was determined less by the candidate's learning and scholarship in his own field than by his soundness on the doctrines of the Trinity or of Baptismal Regeneration and by his adhesion to the Thirty Nine Articles or to the Westminster Confession.

The taboo is due also to a characteristic ingrained in our national temperament. We have a semi-instinctive disposition to shy away sharply like a nervous horse from any question arousing strong emotion or likely to involve commitment at a deep level. This has its creditable side, a loathing for a Tartuffe or a Pecksniff and a healthy sense of the inadequacy of definitions and formulae to do justice to living reality. But a praiseworthy reticence in the expression of one's innermost convictions is one thing: to have no such convictions to express is another. Yet the transition is easy. Nearly all foreign observers note in us a certain intellectual and emotional unadventurousness, a tendency to remain near the surface, an indisposition to dig deep. This is particularly marked where religion is in question. We like to think that ours is the religion of all sensible men and that sensible men do not ask themselves too closely what that may be. How much of the creed of a Church to which we may outwardly conform do we actually believe? Why that, as Newman says ironically, is a

* Reprinted from Sir Walter Moberly, *The Crisis in the University* (London, April, 1949), by permission of the Student Christian Movement Press, Ltd. The volume may be ordered from the S.C.M. Press, 56 Bloomsbury Street, London, W.C. 1, at 15*s*. A later chapter, "Aim and Basis," will appear in the July issue of the *Journal of General Education*.

† Chairman of the University Grants Committee. Sir Walter was educated at Winchester and New College, Oxford; Fellow of Merton College, 1904–37, Honorary Fellow, 1937——; Lecturer in Political Science, Aberdeen University, 1905; Fellow of Lincoln College, 1906–21, Honorary Fellow, 1930; Professor of Philosophy, Birmingham University, 1921–24; Principal, University College, Exeter, 1925–26; Vice-Chancellor, Manchester University, 1926–34; Chairman, University Grants Committee, 1934——.

question delicate to ask and imprudent to answer. When pressed on such matters, we feel uncomfortable, embarrassed and resentful. In its extreme form at least, this is a form of infantilism; for it is a refusal to grow up and to come to grips with a reality which might make claims on us. But it is a trait which those who live the academic life share in full measure with their fellow-countrymen.

Whatever its causes or excuses, such a taboo is disastrous and indefensible. It confines university education to the use of means as opposed to the choice of ends, to training in the acquisition and handling of tools as opposed to appreciation and criticism of the larger purposes for which those tools are to be used. It abjures any contribution to answering the master-question —How shall a man live? For instance a university professor of French may say—"I have studied the French language and literature and institutions with some thoroughness and I can expound them with authority. But whether Voltaire or Pascal has the truer apprehension of reality, whether Talleyrand or Fénélon has better mastered the secret of living, I have no idea. There you enter a region not of knowledge but of private taste or guess-work. My guess is no better than the next man's and I have nothing to offer my pupils." On that showing a university can train a student to be a chemist or a linguist. But what he should do with his chemistry or languages when he has acquired them, whether and why injustice and cruelty and fraud are bad and their opposites are good, whether faith in God is a snare and a delusion or is the only basis on which human life can be lived without disaster—all these things the student must find out for himself as best he may, for a university education can do nothing to help him. If you want a bomb the chemistry department will teach you how to make it, if you want a cathedral the department of architecture will teach you how to build it, if you want a healthy body the departments of physiology and medicine will teach you how to tend it. But when you ask whether and why you should want bombs or cathedrals or healthy bodies, the university, on this view, must be content to be dumb and impotent. It can give help and guidance in all things subsidiary but not in the attainment of the one thing needful. In living their lives the young are left "the sport of every random gust." But for the educator this is abdication.

Whatever plausibility such a self-denying ordinance once possessed, in the present state of the world it has it no longer. In the nineteenth century it seemed possible for a university training to omit all transmission of communal wisdom concerning the art of living, because that was attended to outside the university. Whatever the differences on religious and philosophical issues between Whewell and Mill, Gladstone and Huxley, Newman and Matthew Arnold, they had substantially the same standards of what was good and evil in conduct, they all attached supreme importance to the difference between right and wrong and they were in general agreement as to the kinds of conduct which were "right" or "wrong." They all believed firmly in a system of objective values. In many ways his contemporaries looked on Mill as an iconoclast. But it was Mill who said that it was better to be a human being dissatisfied than a pig satisfied, better to be Socrates dissatisfied than a fool satisfied; and who added that, if the fool or the pig were of a different opinion, it was because they only knew their own side of the question. So the early students at University College London, Owens College Manchester, or Mason College Birmingham could acquire this ethical culture elsewhere, in home, school or church. But no one questioned its necessity. The *Edinburgh Review* which approved the secular system of University College and the *Quarterly Review* which condemned it were alike clear on that point. But it is the validity of any moral order at all that is in question to-day. In Europe amoralism is widely prevalent; and our own abler young men will accept nothing from tradition without searching examination. We academic people are too little awake to this disintegration. The indictment against us is like that brought by Jesus against the Pharisees. We have concentrated on what is of secondary, and have neglected what is of primary, importance; we have paid tithe of mint and anise and cummin, and have omitted the weightier matters of the law, judgment, mercy and faith.

II. FALSE NEUTRALITY

For some time now many of the abler students and of the younger teachers have been in sharp reaction against the liberal ideal of academic detachment and its embodiment of university practice. That ideal is in-

dicted on two main counts; first as frivolous and irresponsible, and secondly, as bogus and hypocritical.

First the traditional academic attitude is felt by many of the younger men to be too exclusively the attitude of a spectator. It is appropriate to one who has a theoretical problem to solve rather than a practical choice to make. It is like that of a gifted Foreign Secretary, of whom it is related that he would hold his colleagues entranced by a masterly exposition, well-informed, witty and eloquent, of the situation in some Balkan country. At the end the Prime Minister would lean forward and say "Thank you Foreign Secretary, and what action do you recommend?"; and then, it became painfully clear that he had nothing to recommend. He had done with the subject; his interest in it was academic; he had lectured on it, and that was that. But thought divorced from responsible action is sterile, and a purely theoretical analysis is liable to lead to impotence. On practical affairs the academic mind is prone to reach a state of permanently suspended judgment, of conscientious indecision. In the words of Professor Hogben, it "prevents you from coming to definite conclusions by propounding unanswerable questions" and it produces "a vague broad-mindedness about the burning questions of the day." To students this seems a form of elegant trifling in which dons engage while Rome is burning without their realizing it. Also dons suffer sometimes from a dead weight of learning which inhibits decision. "Some scholars," said Jowett, "in their dread of ignorance . . . lose their elasticity and freedom of thought, their sense of the proportion and value of facts." This is the attitude glorified in *The Grammarian's Funeral*, "Before living he'd learn how to live"; and in this spirit many a scholar spends his life in accumulating data for some *magnum opus* which he never writes; or, if he does write it, his book consists of prolegomena. But intellectual fastidiousness is a snare. It is futile to wait for a vantage point of perfection, intellectual or moral, from which to act. Probability is still the guide of life, and here "the better is the enemy of the good."

In any case such detachment is antipathetic to the younger generation. Before, during, and since the war, they have lived in a habitual consciousness of a world which seems about to fall in on them. To them the older men in the universities often seem "remote and ineffectual," utopian, fugitives from life, irresponsible shirkers. So, since they cannot get guidance for action from their teachers, they will seek it from less reputable sources. It was thus that, fifteen years ago, the students of Germany fell victims to Hitler. To adapt slightly a sentence of Professor Collingwood's, they will infer that for guidance in the problems of life, since one cannot get it from thinkers or from thinking, from ideals or from principles, one must look to people who are not thinkers (but fools), to processes that are not thinking (but passion), to aims that are not ideals (but caprices), and to rules that are not principles (but expediency).

This reaction may be exaggerated. The ideal of detachment and "irresponsibility" (in Flexner's sense) may not be simply a vice. But it certainly needs to be rethought. It needs this, if only because on many issues neutrality is impossible and the claim to impartiality cannot be sustained. The liberal ideal in its traditional form is based on a view of human nature, including academic human nature, that is naïve. This brings us to the second count in the indictment, which is urged with even greater vigour. Whether neutrality is desirable or not, it is alleged that, when probed, it is found to be a sham. It turns out to cover an uncritical acceptance of the common assumptions of the day or those of some particular social or professional stratum. In other words, so-called academic objectivity is a fraud; and the fraud is none the less disastrous and reprehensible because its perpetrators are commonly also its victims and deceive themselves as successfully as they deceive others.

This masked partisanship can be seen in the fields of politics, religion and ethics. In politics, to keep silence on controversial issues is, in effect, to acquiesce in the *status quo*, that is, in "the institutions of the country," the existing social order, whatever that may be. For practical purposes it is to side with conformists against nonconformists. So in Germany the universities have been tied up within the State, in the United States with the plutocracy, in England with the unwritten laws of a socially stratified society, as truly as in Russia to-day they are avowedly linked to the social revolution and in Spain to Catholicism. In England we are little conscious of this; and it is not quite so true as it used to be, for society as a whole is less stratified. But lookers-on often see what familiarity obscures for the participants; and that our universities reflect a hierarchical class-

structure is certainly their impression. Thus Paulsen writes, at the turn of the century, "In England . . . the scholars are enmeshed in the views and judgments of the governing class of society,"[1] and twenty years later Dibelius[2] expresses the same opinion.

In the field of religion the profession of neutrality is equally a pretence. It is related that the philosophical Faculty of a great American university, on acquiring a new building for their home, proposed to have inscribed over the main entrance the Protagorean saying, "Man is the measure of all things." The President of the university however thought otherwise; and when they returned to work after the long vacation, the words they actually found were, "What is man that Thou art mindful of him?" Here is epitomized the fundamental religious issue; and on this issue the modern university intends to be, and supposes it is, neutral, but it is not. Certainly, it neither inculcates nor expressly repudiates belief in God. But it does what is far more deadly than open rejection; it ignores Him. Though Lucretius, Voltaire, and Marx agree in rejecting religion ("*Tantum religio potuit suadere malorum*," "*Ecrasez l'infame*," "Religion is the opium of the people"), they regard it as pernicious but not as insignificant. Nietzsche proclaims defiantly that "God is dead," but to him this is an assertion having revolutionary consequences for life at a thousand points. But in modern universities, as in modern society "some think God exists, some think not, some think it is impossible to tell, and the impression grows that it does not matter."

Does it matter? If a negative answer to that question is silently assumed, the cause of atheism is won even before the battle is joined. The crucial question is not whether a man can assent *ex animo* to the Athanasian Creed or at the other extreme, whether he has "lost his faith." Theism is not just a speculative opinion, however assured, as e.g. that the internal angles of a triangle are together equal to two right angles, a conviction which one can entertain without doing anything about it. It is "betting your life that there is a God." Equally atheism is no speculative opinion. It is leaving God on one side, having "no need of that hypothesis." In that case one need not bother to deny the existence of God, one is simply not interested; and that is precisely the condition of a large part of the world to-day. It is in this sense that the university today is atheistic. If in your organization, your curriculum, and your communal customs and ways of life, you leave God out, you teach with tremendous force that, for most people and at most times, He does not count; that religion is at best something extra and optional, a comfort for the few who are minded that way, but among the luxuries rather than the necessities of life. "Admit a God," says Newman, "and you introduce among the subjects of your knowledge, a fact encompassing, closing in upon, absorbing every other fact conceivable."[3] But in that case, since it is the habit of the modern university to study all other subjects without any reference to theology at all, the obvious inference is that it does not "admit a God" in any sense that is of practical importance. It is a fallacy to suppose that by omitting a subject you teach nothing about it. On the contrary you teach that it is to be omitted, and that it is therefore a matter of secondary importance. And you teach this not openly and explicitly, which would invite criticism; you simply take it for granted and thereby insinuate it silently, insidiously, and all but irresistibly. If indoctrination is bad, this sort of conditioning and preconscious habituation is surely worse.

Two comments remain to be added. First this state of things is the result of no plot; no one has planned it. But if a planner of atheistic conviction and Machiavellian astuteness had been at work, he could hardly have wrought more cunningly. Secondly we are here arguing, not that atheism is untrue, but that, whether it is true or not, the modern university is not neutral. To persuade yourself that you are what you are not, is intellectually demoralizing; one need not be a theist to assent to this. A camouflaged partisanship is both more dishonest and more damaging than one which is open and avowed. Though Christianity has played so large a part in our national traditions, we do not claim that the modern university should base itself, like the older type, on acceptance of the Christian view of life. But this should not go by default as it does now. The chal-

[1] Friedrich Paulsen, *The German Universities and University Study*, trans. Frank Thilly and William W. Elwang (New York: Charles Scribner's Sons, 1906), p. 262.

[2] Wilhelm Dibelius, *England*, trans. Mary Agnes Hamilton (New York: Harper & Bros., 1930), p. 409.

[3] John Henry Cardinal Newman, *The Idea of a University* (London: Longmans, Green & Co., 1935), p. 26.

lenge should be fairly and squarely presented to students. The decision they have to make is, in the highest degree, a responsible decision, but to-day it is seldom presented or taken as such.

There is a yet more elemental issue in regard to which it must be asked whether universities are, or should be, neutral. That is the question whether the distinction of right and wrong is still to operate in affairs, both public and personal. For Europe to-day, and indeed for the whole world, this is a question of life and death. By a correct intuition, public opinion perceived that the recent war was not a mere struggle for existence and power. It perceived that Hitler had raised in a spectacular form the question whether any moral standards were to be recognized, of which the possessors of power must take account and by which they were to be judged, or whether justice is only "the interest of the stronger" and the so-called obligations of justice, good faith and humanity only rules of conduct for slaves, often convenient to their masters but never binding on them. But Hitler's challenge is only the most conspicuous instance of a general tendency. Long before the war amoralism had gone far on the continent of Europe. The violence of the war-years, the threat of the atomic bomb and even the experience of the resistance movements have deepened it. The best of our own young men are disillusioned, suspicious of idealistic appeals as "baited by knaves to set a trap for fools," disinclined to accept any moral code at second hand or from convention. They will not be held by any conventions which strike them as primarily designed for "the maintenance of comfort and security as known to a suburban street in peacetime." In nothing has Dr. Flexner's book more clearly "dated" than in his suggestion that morality, like cleanliness, can now be taken for granted.[4] This is the fundamental question of our day. How are the universities oriented towards it? Are they oriented towards it at all?

But here too the universities have not only been irresponsibly neglectful. They have also escaped their own notice in covertly playing a destructive role. As is explained in the following section, we are coming to realize that much in their present structure militates against the development of responsible personality.

[4] Abraham Flexner, *Universities, American, English, German* (New York: Oxford University Press, 1930).

III. FRAGMENTATION

For many years the work of universities has tended to be done in an increasing number of separate watertight compartments. Both for students and for staff the attainment of a synoptic view or map of the intellectual world and the relating together of the different disciplines of study, on which Newman laid so much stress, have largely dropped out. Here it is fair to recognize that the universities are in a great difficulty, since much of their human material is already warped in this respect when it first reaches them. In this warping both home and school play a part. Home tends to be set on the ultimate attainment of some job which will carry with it a measure of economic security and of social standing. Here the boy who arrived at school one day with a note, "Don't teach my boy poetry, he's going to be a grocer" is representative; if he had been an intending teacher, his parents' outlook would have been no less narrowly vocational. School tends to be set on success in examinations, which is the shortest road to a good job; and such success is sought by concentration on the matter immediately in hand. During their last two years the cleverer pupils are working for Higher School Certificate or for College scholarships at Oxford and Cambridge. The quantity of information demanded of them is continually rising. Curricula are overloaded. For the great majority the only chance to cover the prescribed course is to keep severely to it and to explore neither to the right nor to the left.

Thus the student is apt to arrive at the university with his mind already set in an attitude of incuriousness outside his own restricted field. In any event it would be hard to counteract this, and all too little effort to do so has yet been made. At the university the same causes operate as at school and produce the same results. In the remoter distance the prospect of a job, in the nearer the examination class-list, dominate the student's mind. He concerns himself only with "what pays for the schools." Dr. Hutchins tells us of a friend who took an hour to explain to his law-class the economic and social background of the fellow-servant rule. At the end of the hour one student inquired "What's this got to do with the law?" And Dr. Hutchins comments, "There is a good deal to be said for the boy's position; he had come to the university under the impression that it would prepare him for the bar examinations and teach him the rules of the game. He felt that he was be-

ing cheated."[5] Almost any university teacher could relate a similar experience.

The effect of this tendency is narrowness in the individual and fragmentation in the university. In the words of Archbishop William Temple, a university becomes "a place where a multitude of studies are conducted, with no relation between them except those of simultaneity and juxtaposition."[6] The student is often confined to one of these; and even if he studies more than one, he is seldom led to reflect about their bearing on one another. It has been said that a lawyer's training is the worst possible for a Foreign Secretary. It is the barrister's business to work intensively on one case at a time and then to put it completely aside and go on to the next one. But the Foreign Secretary requires to have the whole field in mind all the time, since what is done in one plan may have repercussions everywhere else. In the graduate, as in the Foreign Secretary, grooviness is a grave defect; but it is also a common one. In a recent lecture Professor Woodward has pertinently contended that no one should receive an honours degree without showing evidence of that "minimum of general understanding which differentiates education from technical skill." But few university teachers can feel any confidence that most honours graduates to-day fulfil this condition.

This defect has not passed unnoticed. It is, in fact, quite widely acknowledged and deplored, and suggestions for mitigating it are numerous. But its full dimensions are rarely perceived and its true gravity is too little understood. It can indeed be viewed from a number of different levels. First the lack of general information and of wide reading and culture may be regarded simply as the lack of an attractive and desirable grace. Dons may often, and students sometimes, be heard to regret this; but the regret does not go very deep. Dons will not make big sacrifices, they will not for instance make radical reductions in the specialist demands of honours schools for which they are responsible, in order to leave more room for a culture of which, sometimes, they are themselves devoid. Students again are apt to regard such culture as a luxury which, whatever its charms, must be subordinated to more immediate necessities. Secondly, this "atomism" may be felt to impair the character of the university as a community, since it prevents genuine communication between different sections. In particular it has resulted in an ugly rift between the scientific and the literary faculties. But even within the same faculty scholars have very often given up the attempt to understand one another outside the narrowest groups. The President of a great American university once remarked that the members of his teaching staff had practically nothing to say to one another, for they had nothing in common. They had no common core of culture, no common frame of reference or stock of fundamental ideas. This is becoming a feature of university life everywhere. Trivialities form the only meeting-ground. Students, it has been said, talk to one another only about athletics and the Faculty only about the weather. Thirdly it may be seen to result only too often in a narrow and arrogant departmentalism, which takes for granted that "there's nothing like leather." This is the "provincialism" described by Matthew Arnold as "a serious, settled, fierce, narrow misconception of the whole relative value of one's own things and the things of others." It produces a one-sided and dis-proportioned outlook, and it disqualifies for judgment outside an extremely limited field.

But beneath all these there is a further and a deeper level from which the prevailing fragmentation must be regarded, and it is with this that we are specially concerned. For it impairs not only the outworks but the citadel of personality; and it does so not by frontal attack, but by slow erosion of the foundations. So far as their university studies are concerned, most students are nowhere confronted with the challenge or the opportunity to see life steadily and whole. They are not stimulated to regard their own lives as a whole rather than as a set of disconnected experiences, to make a plan of life and to feel responsibility for it, to face a life-challenge and to make a life-choice. Hence they may never come of age morally, as persons able to decide and to act as responsible human beings. In practice, of course, students must and do integrate their lives in some degree, but generally the university does not help them. In this respect it leaves them to the influence of agencies of a sub-university grade, such as the cinema and the cheap newspaper. Indeed by abstention

[5] Robert Maynard Hutchins, *The Higher Learning in America* (New Haven: Yale University Press, 1936), p. 38.

[6] William Temple, *Freedom, Peace and Truth* (London: Oxford University Press, 1942), p. 5.

it insinuates an impression that such integration is not a matter of the first importance.

It thus begs in advance the question of belief in God for it does away with the only condition in which such a belief can have meaning. You can have a strong sense of personal responsibility without a belief in God, but you cannot have a living belief in God without some sense of responsibility, some conception of your whole life as coming under judgment. A conscious orientation of the whole self to the whole universe need not involve theism; but, without it, there can be no theism.

If this is true, the modern university is betraying its students. The more unthinking type of student simply drifts. Some sort of embryo of a working creed he must have; no one out of an asylum can live without it. But his version is uncritical and mainly unconscious, it is picked up at haphazard, and it is muddled and incoherent. He never faces as a whole the social problem or the problem of his personal life. Two books about British student life were written just before the war. Their standpoints are sharply different, but each is based on wide contacts and on recent personal experience. They agree in emphasizing the pervasive triviality of corporate life for the majority. On the other hand, the thinking type of student is concerned, and often passionately, to find a working philosophy of life. He discusses major questions constantly. But since he has little help from the university, his discussion is often callow and has small reference to "the best that has been thought and known." Thus, of these two types, the former is not being helped to ask, nor the latter to answer, the really fundamental questions; and the university is doing its duty by neither. Here, as Christians, we have to admit that we ourselves have a bad record. We are as deeply implicated in this fissiparous and disintegrating tendency as anyone else and have as little understood its true import. We are in no position to say, "This comes of your not listening to our warning." On the contrary, if our present diagnosis is true, we, of all those concerned in universities, are specially called to an extremely thorough "Metanoia."

IV. UNCRITICIZED PRESUPPOSITIONS

Mr. C. S. Lewis begins his Riddell Lectures, *The Abolition of Man*,[7] with a scathing exposure of the misuse of suggestion as illustrated in a certain school textbook on English. The authors of the textbook had commented on a particular aesthetic judgment in such a way as in effect to "debunk" all judgments of value. "We appear," they say, "to be saying something very important about something: and actually we are only saying something about our own feelings." This implies, as Mr. Lewis points out, that judgments of value are only subjective and are unimportant. Further "it is not a theory they put into his (the schoolboy's) mind but an assumption, which ten years hence, its origin forgotten and its presence unconscious, will condition him to take one side in a controversy which he has never recognised as a controversy at all." For Mr. Lewis's immediate purpose—and for ours—it does not matter whether the belief so implanted is, in fact, true or false; in either case the procedure is wholly irresponsible. The teacher is doing something which is liable to have a profound effect on the pupil, but that is probably unintentional and unconsidered. The pupil is being subtly conditioned, by a form of suggestion which invites no critical thought, to think and feel in a particular way on an issue of the first importance. This is educationally disastrous and indefensible.

We have already emphasized the immense effect which is in fact exercised by unconscious assumptions. The major part of most people's conclusions rests on unformulated major premises. Thus there is acute need of a far greater attention than most of us pay to the latent assumptions underlying our own and other people's reasoning. To stimulate this, is one of the university's most urgent and most neglected tasks.

To recognize the part played by presuppositions is, on one side, to recognize fallibility. We all see the world through, more or less, coloured spectacles, and many factors have contributed to determining the colours. First we are finite beings, each of us living at a particular time and place and having a limited mental power. This involves inevitably that we see things from a particular angle and our preconceptions reflect that. Secondly the personal equation cannot be eliminated. What I think will depend in part on the kind of person I am. I am not only a finite being, but I have a particular psychological bias, derived from my particular temperament. According as I am a natural optimist or pessimist, sentimental or "hard-boiled," the same events will take a different colouring for me. Mark Tapley or Mrs. Gummidge, Mr. Pickwick or Mr.

[7] New York: Macmillan Co., 1947.

Gradgrind, will undergo different experiences in the same conditions. What they actually see is affected by what they expect to see. Thirdly, not only my psychical make-up but also my social background determines the character of my vision. The class to which I belong, my economic interest, my political party, my church, all contribute to tinting my spectacles. It does not require abnormal penetration to trace with some clarity the influence of such factors on those who differ from us; but it is only with extreme labour and pain that we can detect them in ourselves. Fourthly, along with the whole of our generation, our insight is subject to the limits of a particular historical period. Here too we can detect this quite easily in the writers of earlier periods, but at best only dimly in our own. It has been pointed out that even the *Cambridge Modern History* gives a totally inadequate consideration to economic influences. It does not require a historian of Lord Acton's penetration and range of knowledge to see that to-day; but his plans were laid fifty years ago. Again we speak of the "Whig interpretation of history." But we are only conscious of that because we have, to some extent, outgrown it; Macaulay did not think he was writing Whig history but objective history. Finally we are biassed, imperceptibly but constantly, by emotion. "Perverse emotions combine with twisted reason to enchant and enthral us." Naturally this is truest in fields such as history, literature and philosophy in which value-judgments are involved and emotions are stirred. But, even in more abstract subjects such as textual criticism or mathematics, a scholar tends to be biassed in favour of any opinion to which he has publicly committed himself. Professor Smith's quest of truth is insensibly coloured by an impulse to defend his original thesis against the wrong-headed and ill-natured criticism of Dr. Brown. In recent years it has become so notorious as to be a commonplace that what purports to be objective thinking is commonly a "rationalization," that is, the finding of ingenious reasons for believing what we want to believe; while a system of such rationalizations constitutes an "ideology." But few people have the fortitude to apply this painful truth to themselves and, as yet, it has had a quite inadequate influence on educational practice.

The part then played in our thinking by preconceptions, often emotionally engendered, is certainly enormous and frequently sinister. One of the chief functions of education, and above all of a university education, should be to provide some kind of prophylaxis against this distorting influence. But the universities are still organized on the basis of the old liberal view and that view is impossibly naïve. According to it one can, and one should, divest oneself of all presuppositions. But we cannot do this if we would, and we should not if we could. Some presuppositions are not only unavoidable but indispensable. It is not indiscriminate proscription but a searching critique that is required.

For instance no science can get on at all without some working assumptions or postulates, whose validity for the purpose of the investigation is presupposed and not proved. Some of these such as the postulate of the uniformity of nature are common to all the natural sciences. Others such as the universal applicability of quantitative methods are peculiar to a single science or group of sciences. Their justification lies in their working, that is, in their enabling the scientist to get on with his job successfully. Sooner or later, any that do not do this are discarded. The splitting of the atom and the manufacture of the atomic bomb are presumptive evidence that the physicist's working assumptions are valid, at least for his own purpose. Again all scientific investigation, whether in the physical or the human field, starts with the selection of certain objects or events for study. For example the historian deals not with all events but only with certain events or classes of event singled out as being significant, as being specially important or interesting. He attends only to what interests him as a historian. He isolates it from much of the context in which it actually occurs and which he assumes for his purpose to be irrelevant. Such preselection is indispensable; and it can only be made on the basis of some implied standard of values. Again, any particular investigation usually begins with some tentative hypothesis which is to be tested. A large part of the genius of the great scientist consists in his trained intuition which suggests the right questions to ask. Thus what he finds is determined in part by what he expects to find. The competent scientist does not approach an investigation without any antecedent expectation, but with one which is clear and definite and which dictates the questions which he asks. The scientist differs from the layman principally in having an elaborate technique, whereby he can carry much fur-

ther the process of isolation and interrogation. He puts his material through the third degree.

What is essential to honest thinking is not that all presuppositions should be discarded, but that they should be uncovered, clearly expressed and thoroughly scrutinized. "Inferences may be as dispassionate as logic or evidence can make them. But it is a wise student who knows all his own premises."[8] In particular, the emotional factors in our judgments should be revealed to ourselves and to other people. "We have to uncover our sub-articulate egoisms."[9] Once this is done, it becomes possible to discriminate. Some cannot bear the light of day: to expose the influence of greed, antipathy, jealousy etc. is to neutralize them. Others have a dual character; they are valid within a particular field but not beyond it. This is true of the methodological assumptions of particular sciences, for example, the insistence upon the use of quantitative methods. The scientist is amply justified in the use of such assumptions in so far as they enable him to get on with his own work; and any that do not are soon discarded. But it is an unproved assumption that they can be transferred to other fields. The myth that Latin Prose provides an adequate basic mental training for the engineer or the administrator is now discredited. But those who would simply, for "Latin Prose," read "the experimental method of physics" or "a training in statistics" are guilty of a similar fallacy. Aristotle long ago pointed out that it is as inept to demand geometrical demonstrations of a moral philosopher as to put up with plausible rhetoric from a mathematician.

An open mind need not, and should not, be an empty mind. The scientist or historian has more preconceptions than the layman. To the ignoramus one event is as likely as another, to the expert it is not. If a reported event or the result of an experiment seems to contradict natural laws as hitherto understood, the expert will rightly subject it to unusually stringent criticism. Not only does the expert have superior knowledge of what is probable; he is also more fully aware of the various ways in which fraud and credulity have combined to disseminate unfounded beliefs. A miracle is not to be accepted on evidence which would be sufficient for establishing a normal event. The naïve proposal to dispense with all preconceptions seems to be due to a confusion between two different moments in scientific investigation. When an experiment is actually being conducted, the experimenter must—provisionally and for the moment—put out of his mind all previous estimates of the probabilities. He must conduct the experiment and observe the result as though the initial chances were equal; otherwise it would be worthless as a test. But when the experiment is completed, all that he believed before comes back into the picture; the new evidence has to be correlated with the old. It never leaves the pre-existing doctrine precisely where it was before. Either it confirms it, or it modifies it or it casts doubt upon it. In the last event, the experimenter may suspend judgment till he has further data. For the time being he may, on balance, adhere to the received doctrine, thinking it more probable that he has made some mistake in the experiment or has misinterpreted its results than that the received doctrine is fallacious. He will do so of course with a certain question mark; and if further evidence is forthcoming, his own experimental findings will be brought into the reckoning. But in no event will he, at this stage, treat his preconceptions simply as prejudices to be disregarded. Otherwise "quacks" would have a glorious time.

Mental health then involves the avoidance of two extremes, the closed mind and the empty mind. It is possible to hold preconceptions in such a way that one's mind is not really open to entertain any fresh evidence that seems to contradict it. This is the notorious fault of the dogmatist; and for one open and avowed dogmatist there are half a dozen who are dogmatists unconsciously but quite as effectually. The great advances in science have generally been made by men who were ready to take interest in, and to concentrate attention on, the unexpected, and, if need be, to revise their presuppositions. On the other hand simply to jettison all presuppositions is not only impossible but absurd. What is required is, to integrate the new and the old, and not to ignore either.

Similarly, while emotion is dangerous, it is often indispensable. A literary critic who was all sensibility would be a very poor guide. But a literary critic who

[8] Ministry of Reconstruction, *Final Report of Adult Education Committee* (Cmd. 321; 1919), p. 80, par. 139.

[9] Mary Parker Follett, *Dynamic Administration*, ed. Henry C. Metcalf and L. Urwick (New York: Harper & Bros., 1942), p. 39.

had no sensibility would be disqualified from the start; he would be like a colour-blind art critic. In history, politics, ethics and all humane studies, a "judicial" attitude is the first qualification for the truth-seeker. But this should not be interpreted too negatively. A judge who was run away with by moral indignation or by human sympathy would be a very bad judge; but even worse would be one who, in his own person, was a stranger either to moral indignation or to human sympathy. He would be a judge to shudder at, and he would be unable to understand a large part of what it was his business to understand. It was Burke who warned us, instead of girding at general prejudices, to employ our sagacity in discovering the latent wisdom that commonly exists in them; and who added that such wisdom was all the more valuable when bound up with an emotional attitude, an "affection," which much enhanced the likelihood of its being put into action. The relativity of knowledge has been much emphasized in recent years through the work of philosophers dealing with the methods of the humane sciences, such as Dilthey and many others in Germany and Collingwood in England. Writing in 1932 on the problems of the German university Dr. Doerne goes so far as to say, "The conception of learning as operating without presuppositions is shaken to its foundations, the ideal of an exact objective knowledge of 'reality' is revealed as a mere illusion."[10]

But at this point the critical reader will rightly take alarm. "Are you not" he may ask, "preaching dangerous doctrine? Your quotation from Doerne is apposite in more ways than one, for he describes the temper in the German university world which almost immediately led to capitulation to the Nazis. You are opening the door to 'thinking with the blood,' and similar nonsense, and to accepting, with avidity but on inadequate evidence, whatever may be comfortable or profitable or exciting or edifying; and this is mental debauchery. Because it is harder to think straight than we used to suppose, are we wilfuly to allow ourselves to think crookedly? Because no historian attains absolute impartiality, are we to abandon the attempt to be as impartial as we can? For example, Stubbs and Acton are generally reputed to be more impartial historians than Macaulay or Froude. Is not this due to their keener conscience about objectivity, and is this the time to administer a narcotic? Your attitude strikes us as a form of devil-worship; for the scholar or scientist it is equivalent to saying, 'Evil be thou my good.' You are in the tradition, we grant. Christian apologists have often indulged in this type of wishful thinking; but that only makes us the more suspicious."

This warning is salutary. The field of presuppositions abounds in pitfalls which none of us entirely escape. The temptations are real and insidious. But if many presuppositions are disreputable and most are liable to misuse, it is all the more important that they should be recognized and discussed and not ignored. And here it is necessary to press home the question, Who is the real obscurantist? The most dangerous preconceptions are those which are unrecognized and uncriticized. The most pernicious kind of bias consists in falsely supposing yourself to have none. If we say that we have no bias, we deceive ourselves and the truth is not in us. According to the familiar story, Socrates said that he was only wiser than other men in that he knew his own ignorance, while they were ignorant without knowing it. He is more judicial than other men who knows his own bias, while they are biassed without suspecting the fact. The first step towards a greater measure of intellectual integrity is to stop "kidding ourselves" that we are or can be wholly unbiassed, and to set ourselves to think how the dangers arising from this can be minimized.

Once our presuppositions are brought into the open, they are relatively harmless. We can discount them ourselves and so can other people. Their influence can be checked too by comparison with judgments on the same set of facts made by those who start with a different initial bias than ours.

V. NEGLECT OF MORAL AND SPIRITUAL FACTORS

Since value-judgments are indispensable to any rational organization of the life of individuals or of communities, a university training should enhance the student's capacity to make such judgments intelligently. But does it in fact achieve this? Does it often even attempt it? It is not easy to give a confident answer. Perhaps this is because character-training has come to be

[10] Martin Doerne, "Problems of the German University," *The University in a Changing World*, ed. Walter M. Kotschnig and Elined Prys (London: Oxford University Press; Humphrey Milford, 1932), p. 63.

thought a nursery activity, beneath the attention of the university and an affront to the dignity of the student. But Plato and Aristotle knew better. They were well aware that understanding in questions of value is not a special function unaffected by the quality of the personality as a whole, but can only be attained where there is already a foundation of trained sensitiveness and disciplined behaviour. To supply these prerequisites of understanding is the first task of education. It has been truly said that it is futile to talk of "free will" in the case of a child who has not yet attained a "will" and is simply a bundle of undisciplined impulses. Similarly you cannot attain "practical wisdom," that is, the faculty of habitual good judgment in questions of values, without two conditions. First you must have attained a certain mastery of impulse and emotion; not that you are wholly devoid of these (which would be a disqualification), but that in you they are rightly directed. Secondly you must have had some experience of the good and some disposition to care for and aspire to it. It is for lack of this sort of training that so much juvenile discussion of major questions is mere talk, because it has little basis in moral experience. It is too little related to the real springs of action.

But at this point we may be met with a strong protest. You are suggesting, it will be said, a return to a a servitude from which the university has slowly emancipated itself. You ignore the specific task of the university which is education of the mind, in effect, and, in effect, you subordinate it to edification. You want the university to do the work of the Church. There is no need to decry moral excellence of social reform, but they are not the university's distinctive job. What is wanted of the university teacher is not that he should be a good husband and father, an active citizen or a pillar of his church. It is the scholar's distinctive equipment and conscience, a critical sense trained to the finest discrimination, a thorough mastery of his subject, together with the gift of lucid teaching and of stimulating his pupils. Indeed the quest for edification is not only irrelevant, it is actively harmful. It is likely to lead to bias and wishful thinking, and to result in scholarship less finished, enquiry less far-reaching and fearless, and graduates turned out with a slenderer intellectual equipment than they should be.

In such a protest there is an element of truth. The university's special task is to promote intellectual understanding rather than moral goodness. Some university authorities, such as Archbishop Laud or the Pilgrim Fathers who founded Harvard, have gone wrong through insufficient recognition of this distinction. Not all that makes for edification is suitable to a university, much less incumbent on it. But two principles must be insisted on. First, as we have seen, value-judgments are indispensable to the special work of the thinker as they are to any rational life. An education which omits all training to making them is an education maimed. Secondly some moral qualities are essential to intellectual understanding and some moral defects are fatal to it. To cultivate those qualities, and to eradicate those defects, is not irrelevant but deeply germane to the whole work of education. In the fields of the humane and social sciences at least, knowledge is not independent of our fundamental personal attitude. "Certain dispositions of the will . . . enter into all deep and delicate apprehensions, be they of the life-history of a clematis-plant, or of the doings of a spider. A certain disoccupation with the petty self is here a *sine qua non* condition of any success."[11] Something of a parental temper, von Hügel adds, is required for the full understanding of what is below us and something of a filial temper for the understanding of what is above us.

Why is not the output of creative work from the universities bigger and better than, in fact, it is? There is a penetrating discussion of this question in the chapter on "The Conception of a Catholic University" which Professor Hildebrand contributed to Dr. Kotschnig's symposium.[12] He attributes much of the sterility of modern academic thought to defective attitudes of mind, primarily moral, such as these. The first is *indolence*—"a strange dull insistence on remaining rooted to the spot one is accustomed to." This induces blindness to whole ranges of reality and is contrasted with "a certain winged alertness of the mind" which is the condition of insight. The second is *pride*—a supercilious repletion and smugness as contrasted with wonder and "the respectful desire to penetrate things." The

[11] Friedrich von Hügel, *Essays and Addresses on the Philosophy of Religion* (London: J. M. Dent, 1924), p. 12.

[12] Dietrich von Hildebrand, "The Conception of a Catholic University," in Kotschnig and Prys, *op. cit.*, pp. 197–224, esp. pp. 200–204.

third is *resentment*—an egoistic revulsion from what is objective and resistant, which entails a reluctance "to face unwelcome and exacting truth" and so misses illumination because at heart it does not want to be illuminated. The fourth is *distrust*—a shrinking from the responsibility of decision and recognition and "an unwillingness to venture and to let oneself be carried along by things." In this analysis, Professor Hildebrand is saying something of the utmost pertinence to the work of universities and relevant far beyond the bounds of his own communion.

Once it is agreed that much of our troubles is due to defects of the kind here described, rather than to lack of natural ability or to gaps in technical equipment, the inference is clear. For the sake of its own distinctive work, the university is vitally concerned to promote "winged alertness" as opposed to indolence, wonder as opposed to pride, docility (that is, a hospitable attitude to fact, however unpalatable) as against resentment, and the power to make intellectual commitments as against an inhibiting distrust. Indeed if it simply leaves such things to chance, it is guilty of a great refusal—a refusal "to be the university."

Our predicament then is this. Most students go through our universities without ever having been forced to exercise their minds on the issues which are really momentous. Under the guise of academic neutrality they are subtly conditioned to unthinking acquiescence in the social and political *status quo* and in a secularism on which they have never seriously reflected. Owing to the prevailing fragmentation of studies, they are not challenged to decide responsibly on a life-purpose or equipped to make such a decision wisely. They are not incited to disentangle and examine critically the assumptions and emotional attitudes underlying the particular studies they pursue, the profession for which they are preparing, the ethical judgments they are accustomed to make, and the political or religious convictions they hold. Fundamentally they are uneducated.

The College and the Needs of Society

ROBERT M. HUTCHINS*

WE ARE concerned with what education is about and what it can do. It is important to have clear aims. It is also important to have a clear idea of what is possible. Education is a practical activity.

What is possible is affected by the age of the students, the number of students, the conditions of their lives, and the stage of their intellectual development.

What a college is for and what it can do are interrelated. There is no use at aiming at what the institution cannot do.

The aim of an institution is defined by its characteristic role in society. If I say that the role of the University of Chicago is different from that of the Fourth Presbyterian Church, the Art Institute, or the Chicago Orchestral Association, do I depreciate religion, art, or music? If I say that the family is different from the university, do I depreciate it or the moral virtues? Or if I say that the university is not an athletic establishment, do I depreciate health?

The characteristic role of an institution may be suggested by asking what would be lost if it were abolished. Other institutions could take up the burden if the chapel services, athletic exercises, and artistic and musical activities of a college were abolished. What would be lost if a whole college were discontinued?

The country over, not much. The local country club or Y.M.C.A. might carry on. If the college in question were a good one, then what would be lost would be those insights, that training, and those values commonly called "intellectual."

When I say that a college is intellectual, I do not mean that the intellect is something in isolation. All of human life is one. There is, however, such a thing as thought. Thought is not the characteristic activity of any other human institution. It is a very important activity. To know what men have thought and to learn to think is therefore what the members of our society may hope to get from the educational system.

Education deals with man from the intellectual point of view; religion from the spiritual point of view; the family from the moral point of view. But it is all one man.

This does not mean that formal education is the only educational force in the community. St. Paul remarked in the Epistle to the Galatians: "The law was our schoolmaster."

It does not mean that activities and interests other than thought are unimportant. I do not think that thought is the most important human activity. I do not think education is the most important thing in the world. I think that thought is a very important human activity, and one that should be encouraged. I think it has some bearing on our ability to live together and improve society.

There can be no objection to having a college do anything in regard to religion, art, music, moral virtue, health, or vocational training that it can do without being deflected from its essential purpose.

An important part of thinking is thinking about these things. A college should think about religion. If it can be religious, too, so much the better. A college thinks about art and music. What makes a picture or a symphony good? If the college can be artistic and musical, too, so much the better.

It fails if it does not think. It fails to make the contribution that only it can make. Society is entitled to complain of it if it does not think. Society may be the poorer if it is not also religious and artistic. But the col-

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lege has not failed in its essential task if it fails in these things.

Moreover, thinking about religion may help people to be religious if they think well enough and long enough. Thinking may even help to make people good. Good habits are formed by acts; but prudence, which selects the right means to the end, is an intellectual, as well as moral, virtue; and thinking about the aims of human life is a fundamental activity that can help us to be good.

It is unnecessary to insist that biological knowledge has some relation to health, even though we all know doctors who daily violate all the knowledge they possess.

Education cannot be made to carry the whole load of all society's interests and needs. If it attempts to do this, it will fail; and at the same time it will promote the atrophy of other institutions in the community.

We have to remember, then, that our aims are affected by what is possible and defined by our essential role. This does not mean that we should permit temporary obstacles to affect our aims. But we must accept such facts as that education deals with young people; that they are of a certain age; that they have families, a past, and other influences affecting them; and that they are with us only for a certain time. To say that our aims are defined by our essential role is not to say that we will do nothing except what is essential, no matter how desirable it would be. We can do anything that is desirable, as long as it does not prevent us from doing what is necessary.

One difficulty with the things that are desirable is that they are relatively easy and spectacular. Our essential task is hard. Therefore, both faculty and students have a tendency to drift into these things, and our essential task is forgotten. This has been the history of the American college. Our essential task is unpopular. Athletics, religion, and art are popular because they are not controversial. They do not or need not imply any criticism of the existing order. They are generally thought to be good for people. Thought is difficult and unpopular. Therefore, it is necessary to keep emphasizing it.

We are now urged to redouble our efforts and forget our aims. The Report of the President's Commission on Higher Education proposes to get everybody into what are called "community colleges." I am at a loss to discover what the purpose of these colleges is, except that it is felt that everybody ought to have a chance to go to college. Why he should go is immaterial. The Commission seems to suggest that what should go on in these colleges should be determined by the interests of the students and the needs of society.

Let us look at interest first. If a college should teach young people what men have thought and how to think, if all young people in a democratic society should learn these things, can we suppose that they are all equally interested in doing so? Interest is important in education: and the art of teaching is in good part the art of arousing and sustaining interest. But the art lies in interesting the student in those things in which he may be uninterested. He ought to learn the things he ought to know. The job of the teacher is to interest him in those things. It is not the job of the teacher to interest him in the things he is interested in already. In fact, in some cases it may be the duty of the teacher to get him to lose interest in those things.

Then there are the needs of the individual and the needs of society. We have seen already that we must first ask ourselves what we can do. There are some needs of society that a college cannot meet, or at least that other agencies can meet better. Some needs are transitory in the highest degree. This applies to the needs of the individual as well. Some of his needs we cannot meet, or other agencies can meet them better. And some of his needs are transitory in the highest degree. In this country the student may be born in one place, brought up in another, and live and work in several more. A study of the character and needs of one particular community therefore sheds little light on what the education offered in that community should be.

Hence I have some difficulty with Mr. Conant's recent book, *Education in a Divided World*. He insists on the fluidity of our society in both geographical and social terms. He also insists that education must be different in different communities. He says: "Before you judge a school, analyze the families from which it draws its students and the opportunities presented to its graduates. What may be a satisfactory curriculum for one group of pupils may be highly unsuitable for another. And the difference is often due not to discrepancies in the intellectual capacities of the students

but to the social situation in which the boys and girls are placed. This in turn depends on the nature of the local community of which the pupils and their parents are a part."

Unfortunately, if the boys and girls are not to stay in the so-called "class" into which they were born and are not to stay in the place in which they went to school—and this is the basis of Mr. Conant's plea for state and federal aid to education, in which I heartily concur—the differences in the local community are a transient aspect of the lives of the boys and girls, and to determine their education in the light of this transient influence is a disservice to them, to the communities to which they move, and to the nation.

School Review reported some time ago that the San Diego High School has extended its requirements for graduation beyond the usual academic hurdles and includes what are called "Essentials for Effective Living." The new requirements include the following: ability to apply first aid; ability to take care of one's self in the water (*School Review* reminds us that San Diego is a seaport town); ability to engage in two or three sports that may carry over into adult life; ability to write business letters; ability to fill out application blanks; and ability to budget one's income. The girls have to acquire, in addition, ability to buy the right kind of food and prepare it; ability to choose the right kind of clothes and take care of them; ability to take care of a home; and ability to take care of children. The boys must acquire ability to use and take care of simple tools, ability to make minor repairs on household plumbing, ability to repair simple electrical equipment, and ability to repair furniture. All are required to keep clean and neat and use good manners.

Miss Elsa Bauer, chairman of the faculty committee, said: "These embrace the skills and information necessary to be a good citizen, to earn an adequate living, to make a good home, and to maintain good health and contentment." Miss Bauer added: "For some of the skills designated, the paper-and-pencil test is of questionable value. For these will be substituted statements from authorized persons, such as life guards, Y.M.C.A. directors, and other responsible adults."

One may agree that all these abilities are nice things to have, without agreeing, I hope, that these embrace the skills and information necessary to be a good citizen. Nor do they seem to include all the skills and information necessary to earn an adequate living, to say nothing of making a good home or maintaining health and contentment. It would be too bad if this were so, because most of these things the educational system cannot teach effectively, and the effort to teach them will merely prevent it from teaching what it can teach effectively and further the disintegration of those human institutions through which the young learn these things, in so far as they do learn them, today.

Even if these abilities were as valuable as Miss Bauer says they are and even if the schools could teach them, we may remember the words of Sir Richard Livingstone, which should be written on the blackboard in letters of fire whenever a faculty meets to consider the curriculum: "The good schoolmaster is known by the number of valuable subjects that he declines to teach." I would remind you that education is a practical activity and that it must employ certain means for certain ends within a certain time. We cannot be much concerned in education with what is nice. We have to direct our attention primarily to what is necessary. What is necessary is what we and we only can do.

So Harold Benjamin, Dean of Education at the University of Maryland, said the other day: "Too long Latin has been considered general education and driving a car as special or vocational training. Exactly the reverse is true. Latin is useful only to those students whose needs and abilities require it, while driving a car is useful to everybody." He went on to say that what happened to France after 1939 was a devastating commentary on the inadequacy of the French *lycée*, thus intimating that unless we introduced courses in how to drive a car into the American curriculum this country might suffer the same fate.

The reverse of this moving appeal by Mr. Benjamin is the story of the Dean of Christ Church, who was asked by a student what was the use of studying Greek. The Dean replied: "It is not only the immediate language of the Holy Ghost, but it leads to positions of great dignity and emolument."

In so far as Mr. Benjamin and the Dean were concerned with the needs of students—to drive cars and to achieve positions of dignity and emolument—they were both wrong, though for different reasons. Anything that can be learned outside the educational system

should be learned there, because the educational system has enough to do teaching what can be learned only in the system. How to drive a car is one of these things.

Greek no longer leads to any positions except positions in the teaching of Greek, which, though of great dignity, are not of great emolument. We see in Mr. Benjamin's case that merely identifying a need on the part of the student or society does not identify a necessity in the curriculum. We see in the case of the Dean that identifying a need at one time gives us no assurance that it will continue. If either automobile driving or Greek is to be made a part of the curriculum, the argument must rest on something more than that it is or was a need. There are too many needs, too many evanescent needs, too many needs that the educational system cannot cope with effectively.

The doctrine of needs leads to fragmentation and triviality. It also leads to premature and excessive specialization. The theory is that society and the individual have special needs that require the acquisition of special techniques.

As vocational specialization has developed in this country, it has been ineffective even in what it purported to do. It purported to give intensified training in the subject matter of the vocation. But this is not what has taken place. What has taken place has been merely a lack of training in all subjects that have no immediate connection with the vocation. The chief means of vocational specialization has not been intensification but inhibition.

As Dr. Hans Elias has shown, at the beginning of this century every graduate from a French *lycée* or a German *gymnasium* or an Italian *liceo* had acquired at the close of twelve years of schooling, at about eighteen years of age, about as much knowledge of subject matter as three modern college graduates together will have acquired in the United States after sixteen years of schooling, at about twenty-two. In this country the college student majors in one subject, for example, mathematics. In this field at the age of twenty-two he will have arrived at such branches as differential and integral calculus, analytical geometry, and differential equations. The fundamentals of most of these fields were, however, known to eighteen-year-old graduates from the old-fashioned European secondary schools, who also knew equally well three other subjects at least, namely, Latin, Greek, and their native tongue. The effect of our much-praised system of specialization, therefore, has been that the specialist is far behind in his special field and largely ignorant of anything else.

If a modern American student is graduated in classical languages at twenty-two, he will not have reached the level that a pupil of an Italian *liceo* had to reach at about seventeen, namely, the ability to make public, extemporaneous discourses in Latin and to participate in public debates in Latin. And we must remember that these Italian high-school students knew calculus as well.

The process of specialization, therefore, has been a process of inhibition. The traditional definition of a specialist is that he is one who learns more and more about less and less. In the United States he has been one who learned less and less about less and less. The doctrine of needs seems to be subversive of education at every point.

We are talking today about the college and not about the university and its professional schools. Specialization is proper at some point, both in the interest of the student and in the interest of the society. If society needs teachers of Greek, there must be some place where they can be trained. This will have to be a university. If society needs truck-drivers, there must be some place where they can be trained. There is no obvious reason why that should be a college or an educational institution of any kind.

There is no obvious reason why lawyers or doctors should be trained in universities, as is shown by the fact that they are not trained in universities in England. I do not say that the American practice may not be better than that of England; I merely say that the English practice shows that it is possible to train them outside universities and that it is necessary to prove that it is better to do it the American way. The fact that lawyers and doctors in England study the background of their subjects in universities does not affect the point I am now making, which is that merely showing that society needs to have something done or that the individual would like to be trained to do something does not by itself prove that this training should be conducted in any part of the educational system. The question is whether it can be conducted better there

than somewhere else. The obligations of the educational system suggest that the burden is on those who urge the educational system to assume such responsibility to prove that the educational system can discharge it better than anybody else.

There are so many things a society needs to have done, and so many things an individual may want to do, that I am tempted to say that the college should ignore them all and ask itself how it can help its students become the persons they ought to be, rather than ask itself how it can help them learn to do the things that they might want to do or that society might like to have them do.

The one common calling is that of citizenship. The one common destiny is that of manhood. It is useful to remember the words of Rousseau: "It matters little to me whether my pupil is intended for the army, the church, or the law. Before his parents chose a calling for him, nature called him to be a man. . . . When he leaves me, I grant you, he will be neither a magistrate, a soldier, nor a priest; he will be a man."

Should we educate to meet the needs of this society, or should we educate so that our students will try to usher in a better society? At opposite poles on this question we have Kant and Freud. Kant said: "Parents usually educate their children merely in such a manner that, however bad the world may be, they may adapt themselves to its present conditions. But they ought to give them an education so much better than this, that a better condition of things may thereby be brought about in the future."

Freud, on the other hand, took the view that the object of education was to make young people healthy and efficient, to adjust them to their environment, to make them successful in the terms of the society in which they were brought up. His summary remark on this subject is: "I should go so far as to say that revolutionary children are not desirable from any point of view."

The word "revolutionary" is a word of emotional coloration; and it seems unnecessary to caution us against a revolutionary educational system, for no society would tolerate one for a moment. The educational system is a means by which a society hopes to perpetuate itself. But, in addition to perpetuating itself, every society hopes that its educational system will in some way bring the next generation somewhat closer to achieving some of the society's ideals, those in particular which may be approximated without damage, or with imperceptible damage, to the vested interests in society, that is, without revolution.

The great need of every society is for improvement. But the only way in which a society, in a world of contingent, singular things, can hope to improve is through the improvement of its citizens. The most inveterate planners will admit that all plans must take into consideration the possibility that, through acts of God or man that cannot be foreseen, their plans may fail or may have exactly the opposite effect to that which was intended.

We cannot tell what society will be like when our students graduate, still less what it will be like when they are mature adults and are attempting to put to use the education we have helped them get. We cannot prepare them in any literal sense for any given society. We cannot adjust them to their environment, for we do not know what their environment will be. If we could adjust them to their environment, we should not be meeting the needs of society; for one thing society needs is a better environment.

Since it is impossible to extrapolate social tendencies or scientific or industrial development, we can hardly be more specific than to express our conviction that a democratic society is the best; that we want to preserve such democracy as we have; and that we want our society to become more democratic rather than less. The one common calling of our graduates is citizenship. The one thing we can do for them to make them better citizens of a more democratic society is to have them understand what a democratic society is, why it is the best, and how to think, as free men ought to think, about new problems as they present themselves. The more literally and narrowly they are taught about the problems of our present society, the more they are filled with current information, the more they are adjusted to this environment, the less they are likely to be able to think in such a way that they will be effective citizens of a free democratic country in the future.

Here again I have some difficulty with Mr. Conant's book. He says: "The watershed between two fundamentally opposed positions can be located by raising the question: For what purpose do we have a system of public education? If the answer is to develop effective citizens of a free democratic country, then we seem

to be facing in one direction. If the answer is to develop the student's rational powers and immerse him in the stream of our cultural heritage, then we appear to be facing in the opposite direction."

The contrast proposed here seems illegitimate; for it is a contrast between an end and the means to it, not between two opposing ends. Nobody wants to develop the student's rational powers and immerse him in the stream of our cultural heritage as an end in itself. The object of doing so is to make him an effective citizen of a free democratic country.

Through his developed rational powers a student should be able to analyze new problems and criticize new proposals; through his knowledge of our cultural heritage, he should have learned that a free democratic government is the best, why it is the best, and what has to be done to make it freer and more democratic.

If you want to know whether this means to this end is effective, ask yourself whether any totalitarian regime would dare to adopt this kind of education. We know that such regimes have always abolished this kind of education or any reasonable facsimile of it. They have substituted vocational training, technical training, training in the mythology of the regime, and other forms of instruction designed to adjust the young to their environment and to train them to meet the assumed needs of the society.

Nor do I think it useful to regard the society merely as the society of the here and now. Society stretches backward as well as forward. The Great Society embraces the whole tradition of human civilization. One object of immersing the student in the stream of our cultural heritage is to make him understand that he is a part of the human race, that he lives in a tradition which he must comprehend and develop.

The society with which the college should be concerned is the Great Society. This society includes the whole world and all the people living in it. It includes all men who have lived, who live now, and are to live. Our aim is to prepare our students to be a part of this society. I do not mean that the college shall conduct propaganda for world government. I do mean that the college needs to regard itself as a part of a world community and to take upon itself the duty of preparing its students to be members of a world community.

I do not think that this can be accomplished by what are called "area studies" or any other form of *ad hoc* training that involves learning the facts about the geography, climate, customs, and costumes of other lands. If this is to be done, it can be done very quickly through the motion pictures that Encyclopaedia Britannica Films will be glad to sell you. These films are nice; the knowledge they give is valuable; but we should not delude ourselves into thinking that if we have this knowledge we have advanced much into the understanding of other countries or the formation of a world community.

World community will exist only when there is world communication; and I do not mean radio, telephone, or airmail. I am talking about communication not in the sense of the mechanical means employed but in the sense of understanding what is communicated. Here I think it will be found that the best method of preparing the student to be a member of the world community, to teach him to understand, is to develop his rational powers and immerse him in the cultural history of the race.

I think we must agree that the main substance of an education—and I mean a liberal education—must be acquired in adult life. There are two apparently contradictory things that have to be said about the age of students; but they are both true. The first is that our pupils are usually older than we think. Since they are younger than we, we have a tendency to think that they are very young indeed. We forget how much experience we had at their age. In every social context, in the management of their daily lives, we are loath to give them freedom and responsibility. We want to regulate their hours and their attendance at classes long past the time when they should have to take charge of details themselves.

But when we come to the curriculum we forget about this immaturity of which we accuse our students when we are dealing with the noneducational aspects of their lives. We know, if we stop to think about it, that subjects that require experience that passes the bounds of their experience cannot convey their full meaning to them. But the increasing prominence of what are called the "social studies" in the elementary grades suggests that we overlook the necessity of experience for the comprehension of these subjects. The curriculum is upside down; for the subjects that young children can easily deal with are the abstract subjects. It is a gross error to assume that they must be talked to about the

world of real objects that is about them. They have had no experience of that world, and without experience they cannot understand what is said about it. They will do much better with mathematics, music, and astronomy.

History, social science, literature, and moral and political philosophy require experience. Although students should be introduced to history and literature at as early an age as possible because there is something in them for human beings at every age, it is a tragedy that the reading of them in this country stops in youth. It is impossible that history and literature can mean to young people what they can mean to adults. Think of any great play that you have ever seen or ever read and ask yourself how much you owe to your own experience in understanding and appreciating it. As for moral and political philosophy, it is the study of a lifetime.

From this point of view it is not an exaggeration to say that the aim of the college is to prepare the student to educate himself in adult life. Another way of saying the same thing is to say that the aim of the college is to prepare the student for the right use of his leisure.

The great, perhaps the greatest, trouble with the conventional college curriculum today is that it is built on the assumption that when the student has graduated his education will stop. This leads to all sorts of fallacies, such as the attempt to build a curriculum that will cover all subjects and meet all needs. The effort is to give the student in his college years all the education he will ever need, on the ground that he is never going to get any more. The student, by the time he gets his Bachelor's degree, must have all the knowledge, ideas, and insights that are the proper attainments of the educated man. But this is impossible, because in many most important fields understanding comes only with maturity.

In this view the object of the college is to stimulate its students to want to get an education in their adult lives and to give them the training that will make it possible for them to continue learning and get an education in their adult lives. In no sense is a college education terminal. It is preparatory to more education.

The college cannot meet the needs of society as those needs are ordinarily understood. It meets the needs of society indirectly, by making some contribution toward the formation of good citizens. It is primarily concerned with the future of its students in two respects: with the use of their leisure and with the discharge of their duties as members of the Great Society. These needs, and only these, society may properly call upon the college to meet.

*The Concept of Culture in Science**

A. L. KROEBER†

I PROPOSE to discuss the concept of culture—its origin and validity, its use and limitations. Like every concept, this one is a tool; and as a tool the concept of culture is two-edged. It ties some phenomena and interpretations together; it dissimilates and distinguishes others—about which more later.

Like all important ideas, that of culture was the realization of many minds, and it developed gradually. There are still great civilized nations—the French, for instance—who refuse to admit the word "culture" into their intellectual vocabulary. On the other hand, the ancients knew, and modern primitives are aware of, some of the phenomena of culture—as, for instance, distinctive customs. "We don't do that way, we do like this"—such a statement, which every human being is likely to make at some time, is a recognition of a cultural phenomenon.

Phenomena have a way of occurring composite in nature, intricately blended. Their qualities, still more their conceptualized general aspects, can be extricated only gradually from the welter of appearances. Until well into the nineteenth century and in certain situations and contexts until today, the concept of culture has remained unextricated from that of society. When Comte founded sociology and coined its name more than a century ago, he stamped on it the impress of the social. But his famous three stages of mythology, metaphysics, and positivism are stages primarily of ideology, and therefore of culture. Only incidentally are they stages of specifically social or interpersonal relations. Still more does this essential reference to culture instead of society hold of Comte's differentiating characterizations of Catholicism and Protestantism and hundreds of other special dicta.

When so original and penetrating a thinker as Durkheim hypostasized society as that by which early groups were impressed, which they worshiped, and thus originated religion, he put forth a view which has generally seemed farfetched and, to many, mystical. But as soon as we substitute for his nondifferentium of "society" the customs and beliefs which hold together primitive societies and seem to help them to survive—in another word, their "culture"—then the Durkheim interpretation begins to assume reasonableness. It seems fair to assume that that is what Durkheim "meant," what he would say today.

* In his article, "The Study of Culture in General Education" (*Social Education*, Vol. XI, No. 6), Robert Redfield argued for a wider use of the anthropologist's "cultural approach" in general education curricula. In the present paper A. L. Kroeber, the dean of American anthropologists, gives a definitive analysis of this cultural approach, its origin and validity, its use and limitations. Professor Kroeber discusses the various meanings of the concept of "culture"; the possibility of a scientific study of culture; how such a study differs from natural-science studies, on the one hand, and from humanities studies, on the other; to what extent the study of culture includes a study of values and of psychology; and how far the concept of culture can serve to integrate the social sciences.

The Editors believe that no one interested in general education can read Professor Kroeber's paper without being excited by the intellectual frontiers of co-operation that it offers. They know of no discussion so complete and well-informed as this one on the question of whether there is a unique realm of "social science" and, within it, a guiding, irreducible idea.

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That nondifferentiation of the two aspects should continue up to a certain point is expectable, since culture by definition includes, or at least presupposes, society. As something shared and supra-individual, culture can exist only when a society exists; and conversely every human society is accompanied by a culture. This converse, to be sure, is not complete: it applies only to *human* societies. In principle, however, the limitation is extremely important. The existence of cultureless or essentially cultureless subhuman societies, especially the highly elaborate ones of the social insects, serves as an irrefutable touchstone for the significant discrimination of the concepts of the social and the cultural: they *can* exist separately. At any rate, one of them does exist separately.

The word "social" is itself a relatively late appellation. The Roman term was *civilis*, *civitas*, from *civis*, a "citizen," corresponding to Aristotle's definition of man as a *zoon politicon* or "political animal"—a civil animal to the Romans, a social animal to us. Of course, institutions were implied in the term "political animal," and therewith culture was implied, but not as a segregated, coagulated concept. These ancient Mediterranean terms are illuminative of how abstract ideas originate in a matrix of the concrete. When Aristotle wanted to talk generically of what we call "society" and "culture," he used the word *polis*, which still carried full implication and imagery of citadel and city wall, of free citizens entitled to vote and to fight.

The word "culture" in its modern scientific sense, as, for instance, any anthropologist would use it with assurance that every other anthropologist would know what he meant, and not something else—this modern meaning of "culture" is still more recent. The first definition of "culture" in this broad but definite sense of its current social-science usage—as distinct from cultivation and refinement, from nurture, from agriculture and pearl culture and test-tube cultures—the first definition I have found in an English dictionary dates from the late twenties. The first deliberate usage in a book was by Tylor when in 1871 he published *Primitive Culture* and formulated that most-quoted of definitions of culture which begins: "that complex whole which includes. . . ." It is clear that Tylor was conscious of establishing the term, just as he was aware of using "culture" and "civilization" as synonyms in his discourse. To be exact, he already had used the word "culture" a few times as a hesitant alternative for "civilization," and in the same sense but without definition, six years earlier in his *Researches*, as if trying it out on the British public. He may have got it from the German ethnographer, Klemm, whom he read and cited. Klemm spells the word with a *C—Cultur*—in his 1843 as well as his 1854 book. The word appears to have been in general German usage at that period with its modern meaning, and was in no sense handled then like a new coinage. I do not know precisely how far back the German word *Cultur* goes with its modern scientific meaning. Kant uses it repeatedly in his *Anthropologie*, but it is mostly difficult to say whether he is thinking of culture in our sense or of "becoming more cultured." Arciniegas quotes Paul Hazard as saying that the word first appears in the German dictionary of 1793.[1]

Let us take a long step back from both culture and its undifferentiated immediate matrix, which we would today call "sociocultural"—a step back to the psychosomatic. Just as culture presupposes society, so society presupposes persons. It is an assemblage of individuals —plus something additional—that something which we and termite societies share. Well, here, then, are three elements or sets of factors: culture, society, persons, each resting upon, or preconditioned by, the next. In fact, we can immediately go one step further and separate persons into bodies and minds as two aspects which in some situations at least it is profitable to deal with separately—in all strictly psychological situations, for instance. That the separation is warranted, when it is useful, is clear not only from the current distinction of biological science from psychology but also from the fact that plants, though possessing somas, are generally conceded as showing no evidence of having psyches.

So now we are already facing four superposed aspects—four levels, let us call them: body, psyche, society, culture. By now it is obvious where the line of thought is leading us; the next step prefaces the inorganic as underlying the somatic, the psychic, the social, and the cultural.

De facto, phenomena of the inorganic level can also be split up, when, as, and if useful—and in many situa-

[1] German Arciniegas, in *Chemins du monde*, Vol. I: *Civilisation* (1946), p. 146 (and, he adds, the word *civilisation* first appears in a French dictionary in 1835).

tions, perhaps most, it is useful—into physical and chemical. Indeed, we can split finer and laminate off a subatomic level and perhaps another for supermolecular virus phenomena or for crystal manifestations. All these segregations, however, fall within the larger inorganic or suborganic end of the scale; and, as our particular concern here is with the ultra-organic, with the most superorganic at the opposite end, it would be digressive and distracting to enter here into these finer distinctions at the bottom of the hierarchy.

It has become customary of late to designate these hierarchical planes as "levels of organization" and, alternatively, as "dimensions." The latter term is appropriate in certain contexts, as when it is said that every human situation has environmental, organic, social, and cultural dimensions. The word "dimension" here is equivalent to "aspects" or to "class of impinging factors." It definitely avoids even implication of hierarchy. Dimensions cross-cut one another, levels imply parallelism. In a so-called "field approach" to a limited phenomenal area, such as a personality, where emphasis is on the interaction of factors converging at a single point, it is natural to see cultural, social, organic, and physical factors as so many dimensions "radiating" out from the point under observation. By contrast, as the approach is macroscopic, or even telescopic, as in the tracing of large historic patterns or their interrelations, the dimensions automatically segregate themselves into parallel and superposed layers, and the term "levels" is more appropriate.

However, it is necessary not to confound "levels of organization" with "levels of abstraction." It is true that, while we are focusing on cultural aspects, we are in a technical sense "abstracting" from the organic and physical aspects pertaining to the same phenomena. "Abstracting" here means removing our consideration from, ignoring; it is temporary, shifting, reversible. But cultural phenomena are *not* more abstract than physical or organic phenomena in the sense of being more abstruse, rarified, unconcrete, or conceptualized. The surge of anger is as concrete a phenomenon as is a contracted eyebrow or a constricted blood vessel. The custom of headhunting or of catching the bride's bouquet is certainly thoroughly concrete. It is only culture as a generalized concept that is abstract; but so are society, psyche, body, matter, and energy abstract. What is much more significant than abstractness is that cultural phenomena occur organized on different principles from social phenomena, social phenomena from psychic, and so on down the series.

What is clearest about the levels is that certain properties or qualities of the phenomena of each are peculiar to it. Presumably this is due to a difference in arrangement or organization. That which is specifically characteristic and distinctively significant of phenomena of a level is intelligible only in terms of the other phenomena, qualities, or regularities of that same level. The most characteristic qualities or phenomena are never explained by what we know of another level: they are not really reached by other-level knowledge, especially when the levels are well separated. The findings of a study of lower-level phenomena do indeed *apply* to those of higher level, but they apply with decreasing significance.

Thus gravitation, electrical conductivity, and element valence apply to organic bodies as well as to inorganic ones. But principles or laws such as these are the only ones which apply to inorganic bodies; and yet they do not to any serious degree explain the specific organic phenomena of hereditary repetition, of conception and death, of adaptability. These specifically organic processes *conform* to established physicochemical processes; they cannot be *derived* from them. Laws of a lower level set the frame within which phenomena of a higher level operate; they do not per se produce those phenomena. The lower-level laws will explain the constants, universals, and uniformities of phenomena on an upper level. They will explain or describe those qualities or properties which an upper level shares with a lower—that an organic body has mass or conductivity, for instance. They fail to explain or even describe those properties that are specific of a level, distinctive of it—as how an organic body repeats itself in its offspring.

In short, it appears that the total work of science must be done on a series of levels which the experience of science gradually discovers. To reduce everything in the universe to a monistic set of principles, mechanical or otherwise, may be a legitimate philosophy—or may not be; it is certainly not an adequate operational method of science. It involves using the hard-won earnings of physics for verbal extensions into biology or sociology, and thereby short-circuiting genuine problem solution in those very domains. Apparently,

true progress is made when every science is autonomous in its procedures, while also realizing its relation of dependence on the subjacent ones and of support to the independent overlying ones. It is investigation on autonomous levels that is a precondition of most extensions of our understanding of the world. After enough such extensions have been made, it is valid reductionism that gradually integrates and consolidates them. Premature reductionism is just verbal forcing.

This does not mean that a new entity is hypostasized as the unique substance of each level. Life, mind, society, and culture are not outside of matter and energy, not outside of space and time and free of them. They are in and of nature with matter and energy. They are different organizations of matter and energy, if one will, which physicists and chemists cannot, in virtue of their physical and chemical methods, deal with fruitfully, and similarly all the way up the scale.

This is where the modern level-approach differs from the older segregation of spirit from matter, of soul from body. In this the higher substance was reserved from the operations of nature, was excluded from its sphere. The body perished, but the soul went on; matter was subject to mechanical laws, but the spirit was free of them—it stood outside nature. On the contrary, the scientific point of view is that every phenomenon is in nature and part of it. The levels represent empirically found segmentations of the total field of nature, in each of which somewhat distinctive intellectual procedures or operations seem to be most productive. The whole recognition of levels is, in one sense, an affair of scientific methodology, is wholly internal to science. It does not portend the reintroduction of vitalism, mentalism, spirit, or *Geisteswissenschaften*.

Philosophically, cognizance of a system of levels seems to have been recent and rather perfunctory. Bergson has been reckoned a proponent of the view of emergence of the new; but, so far as his *élan vital* is extra-natural, his emergents would be something more than levels. Alexander's *Space, Time, and Deity* (1920) is often credited with being the fullest exposition in English of the point of view by a professional philosopher. Alexander works from space and time successively through matter, life, and mind toward God. This view may stem partly from scientific experience but is used to transcend science and nature. C. Lloyd Morgan's *Emergent Evolution*, three years later, is perhaps the most-cited work on the subject. "There is more in the events that occur in the living organism," he says (p. 20), "than can adequately be interpreted in terms of physics and chemistry, though physico-chemical events are always involved." Vital relatedness—organization on the organic level—is effective because changes occur under it "the like of which do not occur when life is absent." Morgan credits Lewes with the word "emergent," and Wundt with the term "principle of creative resultants," namely, that psychical products are more than a mere summation of elements and represent a new formation. J. Needham and William Morton Wheeler have expressed similar views, which Koestler's second *Yogi and Commissar* essay also sets forth with charm and originality.

Two things hold about these formulations. First, they concentrate on biological and psychological autonomy from the physicochemical and fail to pursue the principle onto the social and cultural level, at any rate explicitly so.[2] Second, the stress is on an evolving universe and on emergences in the course of this. Evolution is therefore a primary postulate, and emphasis is on emergences within this—in other words, on innovating changes. Logically, however, a hierarchical series of levels of phenomena could exist in a static world. How they successively emerged to become graded as they are is a separate problem, which logically need not obtrude. My point is not to combat or deny that there may have been cosmic evolution but to assert that the concept of evolution and the concept of levels are not necessarily involved or implied with each other. Emergence is no longer contained in the idea of levels as soon as levels are separated from evolution. New levels leap into appearance only if one has already assumed an evolutionary and progressive process. I would contend that the whole linkage with evolution has happened because our generation silently takes evolution for granted, as most former generations assumed deity: evolution is a compulsion culturally and emotionally difficult for us to escape from. A scientific methodology based as purely as possible on scientific experience is perhaps really better off without emergence, because unencumbered.

[2] Wheeler does go on up to the social level but not to the cultural. Warden in 1936 did explicitly recognize culture as an emergent.

More fruitful is Koestler's metaphor and diagram of a staircase. Viewed from above, from the angle of strictly scientific exploration, this staircase looks like a plane surface, like a flat continuum to which everything is already reduced and in which everything therefore appears explainable. Viewed from the front, however, by phenomenal contemplation, it is the rise of the series of steps, and the nonpredictabilities between them, that are impressive. In short, primary organizing relations are operative within levels rather than translevel.

There is another aspect of the levels which scientists have generally not noted and philosophers have fumbled when they did note. This is a fact which is not yet fully explained, but nevertheless it is indubitable on the basis of the overwhelming run of empirical experience to date. This fact is that the more basic a level is in the hierarchy, the more successfully do its phenomena lend themselves to manipulation by the methods of science in the strict sense—methods resulting in uniformities, repetitive regularities, and therefore predictability. But, on the contrary, the higher the level, the more recalcitrant are its phenomena to treatment by methods homologous or perhaps even analogous to those of physics and chemistry; whereas they yield readily—and with significance, though of a somewhat different kind—to intellectual treatment similar in principle to that which historians follow. The neo-Kantian philosophers have long since pointed out that, while a strictly scientific approach is generalizing and nomothetic, a historical approach is idiosyncratic, in that it remains much more attached to the particular phenomena per se. Instead of dissolving them away into laws or generalizations, the historical approach preserves its phenomena, on whatever level it happens to be operating, and finds its intellectual satisfaction in putting each preserved phenomenon into a relation of ever widening context with the phenomenal cosmos.

From here, however, the neo-Kantians have not gone on to take the next steps which would seem compelled by a judicial inspection of the actual practices obtaining in the entire study of nature. These further steps are two. First, the contextual relations which a historical approach determines involve relations of absolute space equally with absolute time—not of time alone or primarily, as is so often asserted for history. Also, context involves relations of form, including function but perhaps excluding cause; and therewith it involves relations of value. The question of cause has its complexities, in part because scientists proper are also beginning to challenge and repudiate causality, especially in prestige-laden ultra-physics. However, it is notorious that, in the three uppermost levels of mind, society, and culture, specific causality is extremely difficult to determine. Presumably, this is because the phenomena of these levels are epiphenomena to phenomena of lower levels. It is therefore probably by translevel reductionism that the complex causes of upper-level phenomena will be found, if at all. However, relations of absolute space and time, of form, structure, and function, and of value do remain characteristic of the historical approach.

Second, while it is obvious that the great triumphs of strictly scientific method have been won on the lower levels and the ready development of the historical approach has taken place on the levels of man's mind, society, and culture, nevertheless it does not follow that a dichotomy of levels corresponds in a one-to-one manner to the dichotomy of intellectual procedures. Rather should it be assumed, on trial at least, that the correspondence is only partial and that the historical approach is applicable also on the basal levels—though with certain considerable difficulties—and the strictly scientific approach on the upper levels—again with difficulties. Such a view is not strange, nor is it paradoxical, when one remembers that astronomers admit astronomy to be a historical science; that much of geology is on its very face avowedly historical; and that evolutionary biology, from paleontology through comparative morphology to systematics, professes to be the grand history of life on earth. Until this situation has been met by explicit and straightforward counterargument—which it has not been, so far as my knowledge goes—we must then assume that both the fundamental methods of intellectual understanding—the scientific and the historical—are applicable to all levels of phenomena, though with a sliding degree of fruitfulness.

After brilliantly showing that the *Geisteswissenschaften*, as so called in nineteenth-century Germany, were really disciplines dealing not with spirit or soul as such but with culture and that their *de facto* approach was essentially historical, the neo-Kantian Rickert blocked his farther progress with a simplistic

dichotomy, to wit: Culture, historically intelligible, versus Nature, scientifically intelligible. Here the antithesis, culture : nature, is a relic of the older idealistic antithesis, spirit : nature, as this in its turn had been a softening modernization of theological soul : body opposition. And it is the same sharp antithesis which led Rickert to misappraise thoroughly the genuinely historical component in the sciences of astronomy, geology, and biology.

In any event, it is cultural phenomena—or, let us say, phenomena organizable in cultural terms and relations—that constitute the very top level of our hierarchy. If it seem rash to affirm this when the concept of culture is of as recent emergence into consciousness as we have seen it to be, we can modify the statement to say: culture is the top level recognized to date. Personally, I would not have the glimmering of a suspicion as to what a level of organization higher than that of culture might be like. Yet a future generation may see more clearly. For the present, however, let us examine the consequences of this top-level position of our subject matter.

First of all, while culture is underlain and preconditioned by social and psychosomatic factors, the enormous influence of culture on the behavior and activity of individual men and of men in groups has become fully recognized. So heavy is this overlay that "human nature," as that which is biologically given before culture begins to operate, has receded into a remote background in the social sciences and is maintained by biologists as a citadel of principle rather than with specific effectiveness. Now, in general, it is the lower levels that condition the upper: life conforms to physicochemical laws, not the reverse, and so on. There is, accordingly, something anomalous to the general scheme of things in the degree to which the human hereditary organism, individually and in groups, conforms to the sway of the culture to which it happens to be exposed. It is doubtful whether there is another instance of factors on a higher level influencing events on a lower to so great a degree as this. Even the physical world is not immune from the agency of the restless human beavers operating with their cultural activities and artifacts: canals, dams, bridges; river diversions and soil erosion; deforestation and reforestation; pilfering of coal, gas, and other resources of the earth's crust; even attempts at artificial weather.

However, it is only the degree of the influencing and its special mainipulative quality that are new as regards culture. There is at best only a trend in nature, not a rigorous law, making lower-level factors the prevailingly influencing ones on upper. A moment's reflection reveals that purely organic agents also have perceptibly modified the surface and outer shell of this physical planet: coral reefs, limestones, coal beds, domes of hydrocarbon oil and gas are among their residues.

Second, it is reasonable to assume that the findings of the top level will differ considerably in kind from those of the bottom levels. All our experience to date corroborates this. The revolutionary extension of physicochemical science by speculation and devised trial during the last fifty years centers around subatomic particles. In the same half-century we have also become much more aware and informed of the domain of culture. But this better understanding of culture has given no sign, until now, of including anything corresponding to the subatomic particles or the geneticists' genes. There is nothing in sight which suggests that we shall discover in culture any invariable elemental units, or even definite relations of integral number or fixed association.

Reflection confirms this negative appraisal. Context, significant of the historical approach which is dominant in the apprehension of culture, concerns external relations viewed as widely as possible—ultimately, in total relations. By contrast, the primary problem of physics, as of genetics and physiology, is to isolate or extricate valid simplicities, recurrent regularities, from the amorphous confusion of nature's phenomena. We may be reasonably confident that nothing corresponding to allelomorphic unit-characters or genes, to protons or neutrons, even to atoms or molecules, is likely to be discovered on the level of culture. Whatever such elemental units may be operative on culture—if any—we may expect to be elements of a lower level.

Indeed, such more or less recurrent near-regularities of form or process as have to date been formulated for culture are actually mainly subcultural in nature. They are limits set to culture by physical or organic factors. The so-called "cultural constants" of family, religion, war, communications, and the like appear to be biopsychological frames variably filled with cultural content, so far as they are more than categories reflecting

the compartmenting of our own Occidental logico-verbal culture. Of processes, diffusion and socialization are both only psychological learning, imitation, and suggestion under special conditions. Custom is psychobiological habit on a social scale and carrying cultural values. And so on.

What evidently takes the place of the formulation of law, in intellectual operations on the cultural level, is the recognition of significances, including values. At any rate this holds in the degree that the approach to consideration of the phenomena is historical in kind, in the sense in which a historical approach has already been referred to as distinct from (though complementary to) the more narrowly scientific or nomothetic one. This becomes clear on consideration of history in its specific sense, the history studied by historians. This is indeed mixed as to its content: a jumble of pieces of individual biographies, more or less dramatic events, social contacts and clashes, definition of or implicit reference to institutions, that is, cultural forms and their succession, with perhaps occasional recognition of dashes of influence from inanimate nature or organic race. Now the recognized failure of history to discover laws may perhaps be partly due to the fact that it operates with its materials nearly as mixed as they come to hand, without consistently selecting them according to one or another aspect or principle. But the notorious weakness of historians in successfully assigning causes—they can ordinarily deal best with minute and immediate ones: why the Bastille fell on July 14 and not 15, as against the causes of the French Revolution—this failure of the historians is compensated for by their ability to express significances. And both the failure and the ability seem to be due to the considerable upper-level, sociocultural component in the materials of intellectual history which attempts more than representational dramatization.

That this is so becomes more evident as soon as consideration is given to bodies of sociocultural and especially cultural materials least contaminated by admixture with individual personalities and particular events. In the study of English as a language it does not matter if "Give me Liberty" was uttered by Patrick Henry or by any other Anglo-Saxon speaker; whether in the eighteenth, nineteenth, or twentieth century; or whether the occasion was historically momentous or not. (Note the term "historically momentous": that is, historically effective or significant—significant to a larger pattern of events, to a context of currents of events and of institutional forms.) To the linguist all this is irrelevant.What he sees in the phrase "Give me Liberty" is data bearing on the form, structure, and relations of certain sounds and meanings. And these sounds and meanings, as well as their form and structure, are constant and repetitive, thoroughly social, and yet anonymous—are therefore anonymous, we might say. The phrase is always uttered by an individual; but by which individual and from what motivation and with what consequences in which circumstances are irrelevant to the linguist.

We have here a clear-cut instance of the selective extrication of upper-level phenomena—in this case linguistic phenomena—from the mixed welter of events in which they occur, and of their intellectual treatment purely as phenomena of that level. What eventuates in such a case is, in popular phraseology, an English grammar. Such a grammar is an organized analysis and resynthesized description of the phenomenal appearance, the structure, and the internal relations and functioning of a language. Such a synthesized description makes sense precisely because it is self-contained and self-sufficient. It deals with superindividual forms and relations; and therefore, while it does not deny the necessary participation of individuals in the phenomena, linguistic science normally and basically suppresses the individual, "holds him constant," "abstracts from him." Why this is so needs no elaborate proof.

It is clear that to operate successfully as a linguist one does not have either to personify or reify languages or to endow them with a substance of their own. One analyzes and synthesizes, so long as results are forthcoming, *as if* one's data constituted a self-contained system. That ultimately they are not wholly self-contained is obvious. But it is a truism that the scientist's concern as scientist is not with ultimates—certainly not to begin with.

It is also clear that linguistic science is consistently backward and weak in ascertaining causality but that its particular selective concentration is what enables it to determine significant relations of form and structure—patterns and their interrelations. The causes of linguistic phenomena such as changes of form or meaning of words—the causes of these in the ordinary sense of "efficient" causes—evidently lie below the linguis-

tic-cultural level itself and presumably are numerous, obscure, conflicting, and determined by still more remote causes. But it will be noted that the linguistic phenomena which result from these sublinguistic causes come highly regularized, formalized, patterned, and definitely interrelated, as soon as we look for the forms contained in them. The phenomena even contain a great deal of predictability, which we are ordinarily neglectful of because it is so commonplace in experience. For instance, the next Anglo-Saxon uttering Henry's sentiment would also say "Give me Liberty" and not "Gave mine liberting." In short, intellectual order and intellectual significance are most readily and successfully attained on the linguistic level by directing attention to form-patterns and form-relations and not toward causal relations.

Finally, as regards approach being "historic" in the larger sense in which the word has been used here, the linguist can operate synchronically and descriptively, or again he can operate diachronically and historically in the narrower, conventional sense. This, however, is a detail and an incident. In both cases the linguist deals with forms and form-relations which have significance to him; and he deals with them to an equal degree in the two cases. In both instances his material remains essentially superindividual, anonymous, patterned, predictive as to its repetitiveness, and almost unconcerned with cause. What this likeness of method of synchronic descriptive linguistics and of diachronic linguistics imports is this: The differentiation into synchronic and diachronic treatment being secondary, the approach which I call the "historic" one, in contrast with the nomothetic approach, is thereby shown to be characterized primarily not by accentuation of the time element and succession in time, as is still so often supposed, but is characterized rather by its other properties that have been enumerated. It is these other properties—superindividuality, patterning, relative nonconcern with cause—that are fundamental to the generic historic approach.

Language has been chosen here as illustration because it is somewhat narrower, somewhat more set off and self-contained, than the rest of culture and therefore somewhat more clear cut. But the difference is only of degree. To understand cultural manifestations, we must also seek for idiosyncratic and physiognomic forms and seek for their significances first within a coherent, largely self-sufficient system of forms such as a particular civilization; and beyond that in a great context of total forms achieved in human history. We must also expect to discover in our material little of causality in the sense of the physicist's causality. We must be ready, where we get further by it, to ignore and suppress the individual, who from the angle of the understanding of culture is perhaps more often irrelevant and distracting than helpful. The ordering or relating which yields understanding in the study of culture is basically best defined, perhaps, as a process of perceiving significant interrelations of forms as forms.

It is evident that the ultimate relating of cultural forms to their largest possible context, in order to bring out their fullest significance, carries in it an element of weighting of the large relation, of the long-range view. And this, in turn, is akin to diachronic interest, to unwillingness to remain restricted to the moment. The moment is sufficient in interest when it is typical of repetitive totality, when it contains totality, as it were, as it does in physics. When the moment or spot is not containing or representative of a larger whole, as when it is uniquely idiosyncratic, then intellectual interest pushes on from it to the whole. Therewith the view tends to become diachronic, and the approach is characterizable as historic in nature, whether or not it succeeds in becoming actually chronological.

In the entire realm of style the superpersonal flow of form is obviously strong. The word itself—*stylus*, the "pencil"—originally had anthropomorphic reference to the particularly quality or manner of writing of an individual. The word "style" tends nowadays to be used for a group similarity, for what is the manner common to a school or series of writers or artists, for a superindividual quality. We can still speak of Shakespeare's "style": we more often speak of "Elizabethan style." And we successfully trace and analyze styles which we cannot, for lack of knowledge, segregate into the contributions of individuals. This holds, for instance, of much of Greek vase painting and of much of Romanesque and Gothic architecture, not to mention the beginnings of most arts and all primitive ones.

Allied to styles are the courses of dress fashion or mode—that which to the unsophisticated the word "style" is in fact most likely to denote. Names of individuals—Prince Albert, Empress Eugénie—are now and then applied to such fashions, but secondarily

and arbitrarily, as picturesque handles. Actually, dress fashions arise obscurely, are due to undetermined causes, and are almost wholly shaped and executed, as well as accepted and used anonymously, by the great nameless throng—superindividually, in short.

Even in the fine arts it is only when these become a self-conscious cult that real interest in the individual artist arises and that he is sought after and his work prized as peculiarly his.[3] In most of human history, and to most men, it is objects and styles that are meaningful; the artist is only a personal exemplification and a passing incident.

It is much the same with inventions. Today we think in terms of inventors. But the discoveries and inventions of other lands, of the past, of our own Middle Ages, are anonymous. Metal-working, blacksmithing; plows, screws, shears; stirrups, horseshoes, harness, wheels, axles; clocks, levels, lamps, candles; glass and pots; fertilizing, irrigating, castrating, riding—the whole basis of mechanical civilization has no personally known authors. They were never recorded or have been long forgotten, because they did not matter.

When finally this condition changes and legend or history gives us, first, imagined inventors and then documentarily authenticated ones, a strange persistence of the ancient condition nevertheless continues. The inventors now come in contemporary pairs or triplets or teams of competitors. Wallace synchronizes with Darwin, Leverrier with Adams, DeVries with Correns and Tschermak; Langley's flight with Wright's; Bell anticipated Gray by a day; Fulton contests with Symington, Fitch, Rumsey, and Stevens. That the making of inventions is normally multiple and simultaneous is by now a fairly well-established fact. From the angle of the individual, the inventors operate independently. From that of the culture, it is the trend, the antecedents, the moment, that unite to force the invention; within its setting it has become, as it were, inevitable; which person is the vehicle of discovery matters little to the society and to the growth of the culture.

Another long-noted phenomenon points the same way, if one will see it so. This is the clustering of great men in certain epochs of certain civilizations and their rarity elsewhere. Nothing now known in biological heredity, nothing in the laws of chance, can account for these tremendous variations in the frequency and intensity of genius. The only explanation yet advanced which is not wholly speculative or arbitrary sees a correlation between realized genius and opportunity given by stage of a civilization's development—the stage where its productive cultural patterns are defined and mature but where their inherent potentialities have not yet begun to be exhausted. By this view, it is the phase of developing culture patterns that is primarily determinative of greatness and fineness of human achievement; geniuses are the index of such development of pattern. What we are wont to call "great men" are those among many more individuals of above-average ability who happen to get born in a time and place and society the patterns of whose culture have formed with sufficient potential value and have developed to sufficient ripeness to allow the full capacities of these individuals to be realized and expressed. This is not really a revolutionary view. It should not even be disturbing to anyone who has apprehended the strength and fulness with which culture holds us all. It ought certainly not upset him who has read and absorbed Sumner's *Folkways* of more than forty years ago and has made the inevitable short extrapolation from the folk to the sophisticates and has realized that we are all in the grip of our ways and our mores—in the grip of our culture.

I have just spoken of greatness and fineness, of potential and realized achievements. Therewith we are plumb in the field of that which the scientist has long said is not for him to touch: values—human values which are cultural values, whether moral, aesthetic, sensory, intellectual, or what not.

One must grant that human cultural values have nothing to do with physics, have no place in it or in any science that models itself on the plan and rules of physics. But how is it possible, without the most sterile stultification, to make intellectual study of social man who is cultural man, and yet permanently to leave out of consideration his product culture, and that essence of culture, its forms and its values?

This is not to affirm that all study which has man for its subject need take cognizance of values. It is possible to investigate responses or learning or the mechanism of propagandizing or the structure and size of social groupings and never tread on a value. But that it is possible to skirt values and yet not touch them is not per

[3] Frank P. Chambers, *Cycles of Taste* (Cambridge: Harvard University Press, 1928).

se a moral mandate to do only that. It is evident that we shall have to admit two nonconcurrent plans or ways of investigation into what are called "social phenomena." One approach tries to follow as best it may the methods of the physicist or to find near-surrogates for them, to measure and experiment, and to dispense with consideration of values. The second approach accepts values as inherent in culture and characteristic of it, as thus being part of nature and therefore susceptible of study like any other set of phenomena in nature, and of study by methods analogous to those used in the study of the other parts of nature, though not necessarily identical with those of physics. Values, along with the culture forms to which they attach, can obviously be described; their differential qualities as well as common characteristics can be compared; their developmental phases, sequential relations, and connections can be investigated. This has, in fact, been done in every study of the history of an art, in every attempt to present a religion, in all ethnographic accounts that rise above mechanical itemization, in all writings on culture history that are more than atomistic.

It is true that it is customary to relegate many such studies to what are named the "humanities" and therewith to read them out of the so-called "social sciences." But what of that—provided that the phenomena considered and the forces in them are regarded as natural, as part of the rest of nature and in no sense supernatural? And provided also that they are subjected to dissection, recombination, and inference according to the basic rules of evidence followed in the investigation of other parts or realms of nature, without admittance of bias, personal advantage, self-superiority, or ethnocentricity.

In the past the trouble has been that values were claimed and regarded as direct products of deity, which stood outside of nature and above it, or as emanating from the soul, whose spirituality, first protected by separation from the body, was further preserved by exclusion from the domain of nature and nature's matter and energy. But surely those days are over. It is difficult to imagine a ground on which contemporary natural scientists would deny validity to any endeavor to understand any set of manifestations occurring in nature, provided that the endeavor is free of reservations, overt or concealed, as to exclusions from nature.

Cultural values, along with cultural forms and cultural content, surely exist only through men and reside in men. As the products of human bodies and minds and their functionings and as a specialized extension of them, cultural values thus form a wholly "natural" part of nature. Here the concept of the hierarchy of levels helps. Not only are the levels separated into steps; their superposition one on the other also ties them together, though not into an undifferentiated unity.

Values, like all sociocultural manifestations, are largely superpersonal. That is, far more of any individual's values are instilled into him from outside, directly or indirectly from his society, than he produces within and by himself. Hence values participate in what used to be called the "collective" or "mass" origin—what I prefer to call the "essential anonymity" of origin—of phenomena like customs, morals, ideologies, fashions, and speech. Sumner's "folkways" excellently conveys this same quality except for its false implication that there also exists a social intelligentsia exempt from being folk. It is possible to exalt collectivity into something self-containedly mystical, as shown by the example of Jung and perhaps of Durkheim. But it is not necessary to be mystical in dealing with collectivity, and we shall therefore assume that we are concerned with the collective only as something completely in relation with the remainder of nature.

Now the collective or anonymous, being everybody's, is also nobody's: there is a quality of the impersonal about it. The things that are everyone's enter individuality more diffusely than those which a person has sweated out for or by himself. These latter he is likely to prize, almost certain to be well aware of, and to have a conscious history and highlighted reasons for, whether these reasons be true or false. But what he shares with the collectivity is more massive and extensive, often more firmly rooted, and also more obscure; it tends to be less in the focus of consciousness. Hence what has been called the "covertness" of many patterns of culture; they have been set aside from the overt patterns as "configurations" by Kluckhohn. "Covertness" here does not imply intent of concealment, as it does so often in interpersonal motivations, rather only lack of awareness. It is probably a case of cultural forms being relatively more and less in focus of awareness along a sliding scale partly of occasion and partly of generic situation. Thus rules of conduct,

which serve as protections to personality, are likely to be formulated with awareness and explicitness, though also subject to attempted warpings by self-interest. At the other end of the scale, rules of grammar in speech, which normally serves to connect personalities when they feel relaxed and in least need of protection, are unformulated, except as a result of the highly sophisticated curiosity of linguists, and can properly be described as having grown up both anonymously and unconsciously. Breaches of grammatical rule, though instantly observed, are ordinarily not resented, because they invade nothing particular to the individual, but are accepted with tolerance, amusement, or contempt.

Allied to this unawareness or unconsciousness of cultural form and organization is the irrationality of much of the collective in culture. "Irrationality" is what it is sometimes called. I have used the term myself. It covers a variety of happenings in culture which have in common a factor of inconsistency. The totality of a situation or way of doing comes out less regular and less coherent than it might have been under rational planning. Daylight saving; the letter *Double-U* after *U* and *V;* mannered medieval instead of classic Roman script; ideographs when an alphabet is available; the spellings "ought" and "eight"; the plural "oxen" instead of "oxes," will serve as examples. The point, of course, is that such irregularities and inefficiencies *were* not thought out but are the result of long and complex histories, with quite different factors often impinging successively. Established individual habits, prestige values, change in one part of a system with lag in another, actual economic cost, mere inertia or nostalgia—all sorts of reasons, mostly rational enough in the concrete situation, have been at work; and the resulting system shows the effect of compromises and patches. Any fool could devise a more consistent system than exists, but even a despot rarely can institute one. In one sense the outcome is "irrational" indeed, in that the institution lacks the full reasonableness which its defenders claim for it. Actually, it rather is nonrational, and only partly that. Most strictly, it is that the institutional pattern is irregular, not wholly consistent.

These considerations rather foreshadow what might be said of the integratedness of the cultures of particular societies. Cultures tend toward integration and, in the main, largely achieve some degree of it, though never total integration. This latter is an ideal condition invented by a few anthropologists not well versed in history. It is hard to imagine any historian—other than a propagandist—bringing himself to advance such a claim as the complete integration of any culture, in the face of his professional experience.

That values constitute an essential element of cultures leads to another consideration. A first account of a new culture, having necessarily to seize and portray the values which help to give it organization and orientation, is likely to emerge as a somewhat idealized account,[4] since the values of the culture are reflected in the society's ideals. Of course, no society is ideal in its behavior. The society aims to conform to the value standards; but we are all more or less lazy, mean, self-centered, cowardly, spiteful, motivated by personal interest. There is thus an unavoidable gap between the ideal or "pure" picture of the culture and the actuality of how this ideal is lived out by the average adherent of the culture. The psychologically minded analyst of behavior, the student of personality and culture, for whom culture is less an end than a take-off of interest, will accentuate the actuality; and between personality stresses and strains, traumas and frustrations, the ideal values of conduct which the "culturologist" has built up into such gleaming, streamlined patterns will emerge tarnished and battered or even cracked. This is a difference to be aware of without worrying too much over it. He who is really interested in the phenomena of culture knows that their ideal values always suffer in actual human living of them. But, at the same time, he knows that in apprehending culture the most essential thing to apprehend is their values, because without these he will not know either toward what the cultures are slanted or around what they are organized.

Incidentally, it seems to be with reference to this value-ideal content that the full study of culture has sometimes been called "normative" and "humanistic." Not that we should study cultures merely in order to learn proper conduct in life but that, without cognizance of their norms, we are studying only their shells.

Its extraordinary variability and plasticity is one of the most marked properties of culture. Living organisms are also adaptable and modifiable but do repeat their basic plan of structure closely in successive gen-

[4] Where this does not hold, the account is likely not to get written, or to be negativistic, like Baegert's famous abusive depiction of the Baja California natives.

erations of individuals. There is almost nothing in culture to correspond to this organic repetitiveness. Allegations of regular recurrences in culture refer to shadowy, large resemblances which are only dubiously substantiable because they are not precisely definable. Itemized bits of culture content may persist with tenacity for long periods. Functioning organizations of cultural material apparently always change, even if they persist, until it is often difficult to say whether we are still within the original complex, form, or pattern or have slid into a new one. This inherent plasticity is evident as soon as one is in position to follow any one institution in detail through the centuries; or, equally, to follow an institution or custom through its provincial or regional variants, or through its appearances among a series of nonliterate tribes that are geographically contiguous.

The reason for this strong propensity of culture to vary seems to lie in the following fact: All cultural phenomena are invariably related to certain other cultural phenomena to which they are similar and which precede or succeed them or occur near them contemporaneously; and their fullest understanding can be attained only through cognizance of these relations. While these relations are indisputable, they are relations of form, value, and significance. They are not, directly, relations of cause in the ordinary sense of efficient cause. The efficient causes of cultural phenomena are the actions or behavior of men—of psychosomatic individual human beings. A denial of this proposition seems to leave no alternative but admission of a set of insulated, self-contained cultural forces operating in and on a self-sufficient cultural substance. This would be a large assumption and would immediately incur the charge, from scientists, of being a mystical tenet aiming to exclude a particular domain of phenomena from the sway of the remainder of the cosmos as studied by total science.

Now, as soon as the efficient causality of culture is admitted to lie essentially on the psychobiological level, it is evident that cultural phenomena are, in the strict sense, only by-products of organic activities, epiphenomena of primary organic phenomena. This conclusion, in turn, would seem to explain the irregularity, unpredictability, variability, and "plasticity" of cultural phenomena. They may once be the large cultural products of inconsequential subcultural forces or, again, the relatively insignificant side-effects of organic causes whose primary expression is in organic consequences. It cannot be doubted that single individuals occasionally affect the stream of culture perceptibly: Napoleon with his Code, Caesar on the Calendar, Shi Hwang-ti with the Burning of the Books, Copernicus with his revolution—not to mention religious leaders. Even suborganic influence on culture must be admitted: catastrophes that wipe out one society, obliterating its culture, but spare another, leaving its culture intact; changes in climate favorable to prosperity and increase of particular populations, with consequent dominance of their cultures over those of disadvantaged peoples. It is evident that the greater the number and variety of these subcultural causes, the greater the variability or "plasticity" of cultural phenomena is likely to be.

Of course, the total outcome is not utter cultural randomness but only a high degree of what may properly be called "plasticity"; and this for the following reason.

Predominantly it will be the psychosomatic actions of human beings that contain the causality of cultural phenomena. But human beings, with their extraordinarily high symbolizing faculties, which means cultural faculties, are always culturalized. That is, they are culturally determined—and heavily determined—by the time they reach the age at which they become potential causes of culture. What is therefore operative is a powerful system of circular causality. The human beings who influence culture and make new culture are themselves molded; and they are molded through the intervention of other men who are culturalized and thus products of previous culture. So it is clear that, while human beings are always the *immediate* causes of cultural events, these human causes are themselves the result of antecedent culture situations, having been fitted to the existing cultural forms which they encounter. There is thus a continuity of indirect causation from culture event to culture event through the medium of human intermediaries. These intermediaries are concerned, first of all, with relieving their own tensions and achieving their personal gratification; but in so doing they also transmit, and to some degree modify, the culture which they carry because they have been conditioned to it. In a sense, accordingly, a kind of

cultural causality is also operative. However, compared with the immediate efficient causality of men on culture, the causation of culture on culture is indirect, remote, and largely a functional relation of form to form. At any rate, as long as one's interest is in what happens in culture, it is the cultural antecedents that became significant. The human transmitters and carriers and modifiers are likely to average pretty much alike. As causes they tend to average uniform and constant, except so far as cultural exposure has differentiated them.

The inquirer, if his interest is really in culture, tends therefore to omit the human agents. He operates *as if* individual personalities did not have a hand in cultural events. In the main he is justified in this procedure. He is certainly justified in proportion as his view is long-range. On telescopic inspection of the greater cultural currents, even the greatest and most influential personalities shrink to minuteness.

As the range contracts and the segment of culture examined begins to be minute, the role of individuals, under the microscopic dissection being carried on, looms correspondingly larger. Here is an equally legitimate method of study; but, of course, it yields results of a quite different order. It gives insight into the interaction of persons and culture: on how individuals get caught in the net of their culture; of how some kinds of them stretch the net or tear rents in it; how others, meanwhile, are weaving new ranges of mesh. The value of such studies is as examples of the close-up mechanism of the change which culture is always tending to undergo. An additional value is in the illumination thrown on the reactions of human beings, viewed as integral personalities, to their enveloping culture. These are certainly important fields of knowledge. But they are obviously different from straight culture history or from the analytic comparison of cultural forms and values as such.

What "culture and personality" as a field of study seems to be, in its purest form, is what has just been described as the interaction of persons and their enveloping culture. Really to pursue this study, it is obviously first necessary to understand pretty well what the culture is and what the persons are like. It would be vain to hope that worth-while results will eventuate from operating with an indeterminately variable *X* matched against an indeterminately variable *Y*. Kluckhohn, prominently identified with the "culture-and-personality" movement, has recently proposed shifting its focus from the mutual interaction of the two factors, as just described, to a focus within personality, as this is affected by hereditary constitution, by social environment, by society, and by culture. This would make personality the real subject of investigation and culture only one of several factors impinging on it. This is less, and rather more one-sided, than a true culture-and-personality field as it has just been envisaged. But such an evenly balanced field is an especially difficult one to investigate until both the contributing fields or levels, whose relation is being investigated, are fairly thoroughly understood. And that can as yet hardly be affirmed of either culture or personality. The danger is therefore of a Scylla of inconclusiveness faced by a Charybdis of forced verbalistic conclusions. Nevertheless, whichever approach is used, the entire legitimacy of the translevel subject of culture-personality interaction is unquestionable.

Of course, some personality study and attempted culture-and-personality study is motivated primarily by a lack of interest in culture or understanding of it—in short, by a desire to escape from dealing with it. There is no valid quarrel with this attitude, only with the nonavowal of its motivation.

Allied are productions like Chapple and Coon's *Principles of Anthropology*, from which even the word "culture" has been expunged—except for a few oversights as on pages 580 and 695. This is a seemingly conscious attempt, at any rate a *de facto* one, to explain culture away into phenomena and factors of lower level. In short, the purpose is outright reductionist.

The problem remains unresolved of how far general forms, therefore recurrent forms, can be demonstrated in culture. The difficulty has been that the recurrent forms are lax and ill defined. With strict analysis the stable content of concepts like feudalism, clan, mana, soul, and taboo, shrinks increasingly. This seems to be because the actual cultural content of such general concepts has been acquired by them during their historical development, which is always complex and always tending toward the unique, as historians have long ago learned to take for granted. The general or recurrent remnant in these seemingly recurrent phenomena is usually not cultural but of lower level, especially psychological. What is common to clans is that they func-

tion as associations of people felt to be kindred, toward whom one has or develops kinsman attitudes. This is essentially a finding in social psychology. More specific recurrences show this even more clearly. The tendency of writing systems to devise or revert to symbols for syllables is quite evidently the result of a psychosomatic inclination to syllabify when speech is being rendered very distinctly or analytically. Psychologists are generally not concerned with any finding so concrete and specific as this one, so they have not announced it. But, so far as it is a little "law," it is a psychosomatic one explanative of cultural phenomena.

Another feature of these partial recurrences or resemblances is that they cut across resemblances due to historical connection and are therefore left without benefit of explanation of similarity as due to community of origin. If, then, the recurrence is due to some deeper-seated, generic factor, the question arises why the results of this are not universal, as they almost always fail to be. The situation is like one familiar in botany. Trees have quite evidently been independently developed in a whole series of families, even orders, of plants. Likewise vines; likewise herbs; and so on. The botanist does not therefore put all trees into one order, all vines into another. Neither does he discard the common-knowledge concepts or categories of tree, vine, bush, herb, altogether; he uses them as a more or less useful adjunct or supplement in description. It would seem that this would turn out to be about the proper function of the corresponding categories of recurrences in culture, such as feudalism, caste, shaman, taboo, totem.

There is also no agreement as yet as to the most general forms among which the totality of culture could be distributed, so far as recurrences or regularities do hold water. The earliest such attempts took the shape of stages and suffered from intellectual naïveté. There was the hunting-herding-farming stage sequence; the mythologic-religious-positive one; even the chipped stone–polished stone–bronze–iron classification.

Of more promise is the concept of recurrent functional nexuses of internal relations: say, of feudalism, piety, and medievalistic economy. This Weberian acproach is still rather inadequately explored.

Finally, there is the question of how far the maximum nexuses or totalities which we call "civilizations" show recurrences in their developmental phases—in other words, show a recurrent pattern of growth. If they do, empirically, show such a recurrent pattern, civilizations would provide an actual and natural segmentation which would help us to organize intellectually the otherwise variably tossing and endlessly stretching sea of the variable continuum of culture as a whole. There is a growing recognition of the probable reality of such segmentation, as well as of its specific limits and inclusions—in other words, of what each civilization takes in.

As to what is at work in the formation of these great units, however, there is wide divergence. Spengler sees immanent predestination, Toynbee moral free will, Sorokin a pendulum beat between sensate and ideational proclivities. This area of inquiry will unquestionably undergo considerable further cultivation, if for no other reason than that our thinking of history has until recently been too ethnocentrically weighted, too "auto-culturo-centric," for the large problems in this area to be effectively conceived or framed.

The question remains whether the concept of culture will serve as a mechanism for integrating more closely the several social sciences. The answer is both Yes and No. There is no doubt that cultural aspects can be recognized and followed through all human areas commonly recognized as social. Economics and government *are* only segments of culture. The data of formal sociology are so intertwined with cultural ones that subjects like family, kinship, associations, the state, are claimed and treated equally by sociologists and by cultural anthropologists. Formal history, even at its most biographical, cannot wholly avoid institutional implications; and, at the opposite end of its range, history is institutional, and thus *de facto* cultural. Psychology can pretty much eliminate cultural factors by narrowing its analysis and by holding the cultural factors constant in selective experiment. Yet, as soon as it rewidens its activity to take in total personalities, a flood of cultural considerations inevitably pours in on it.

However, what all this means is that, if one is interested in cultural manifestations, one can recognize them and deal with them selectively in every scientific study that has man for its subject. And such a selective pursuit will yield certain understandings unattainable by any other and less differentiated method. But it *is*

selective; that is a fact that must not be forgotten. There are other bases of selection, and each has its own kind of fruitfulness. Economic theory, though validated by empirical techniques rather than derived from them, seems reasonably to satisfy economists and is not likely to be given up by them for any more generalized theory of culture. Historians presumably will continue to prefer their accustomed diet of mixed events, persons, and institutional forms with its maximum of adherence to raw phenomena, opportunities for stirring dramatic representation in narrative, and minimum necessity of generalization—and then generalization merely as incidental commentary. We have already considered the translevel or interlevel studies of fields like personality in culture, which, though still groping and unsure of method and occasionally confusing hope with fulfilment, are certainly legitimate and to be counted on to grow.

In summary, it is evident that the cultural approach, now that it is well isolated and developed, will continue to be used because it yields distinctive results. Yet it is equally clear that the cultural approach is not exclusively valid within the area of superorganic phenomena; nor, of course, is it a panacea. It is a selective approach, fruitful because of its selectiveness, but, for the same reason, not unlimited in its scope.

What Kind of Citizens Do College Graduates Become?

C. ROBERT PACE*

Democracy must become an established attitude and activity. . . .

Today less than ever can we afford the social loss that occurs when educated men and women neglect their obligations as citizens and deliberately refrain from taking part in public affairs. . . .

. . . [E]ducation must be . . . focused on the task of establishing in students a habit of social action enlightened by insight into the responsibilities of citizenship at all levels—local, national, and international. . . .

The purposes of general education should be understood in terms of performance, of behavior, not in terms of mastering particular bodies of knowledge. It is the task of general education to provide the kinds of learning and experience that will enable the student to attain certain basic outcomes, among them . . . to participate actively as an informed and responsible citizen. . . .[1]

THUS, IN the official language of the President's Commission on Higher Education, is the importance of good citizenship proclaimed as a goal of education. If we accept this point of view, it follows that we can appraise education, in part, by taking inventory of the citizenship activities and opinions of men and women who have graduated from our colleges.

For more than a year, the Research Department of *Time* magazine has been making a nation-wide survey of college graduates. During the spring of 1947, the names and addresses of all living graduates whose last names began with the letters "Fa" were collected from more than one thousand accredited, degree-granting colleges and universities. When *Time* asked college presidents for ideas about what to put in its questionnaire, letters from hundreds of them said: "Tell us what kind of citizens our graduates have become." In October a thirteen-page questionnaire was mailed to the seventeen thousand college graduates whose names and addresses had been obtained. Replies were received from 53 per cent of this group, or 60 per cent of the net sample exclusive of bad addresses. Interviews were held with a sample of several hundred people who did not return the questionnaire.[2] In the nine months from December, 1947, to September, 1948, the questionnaire responses were coded, punched on International Business Machine cards, and analyzed. The results will ultimately be published in a book.[3]

The nation-wide follow-up study which is described in the remainder of this article is an attempt to look directly at the behavior of college-educated men and women. The 9,064 individuals whose questionnaire responses have been studied represent a pretty good cross-section of American college graduates. The data which *Time*'s research staff has gathered permit a fuller description of American college-educated adults than has heretofore been available anywhere.

My own contribution to this survey was the prepara-

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[1] President's Commission on Higher Education, *Higher Education for American Democracy* (New York: Harper & Bros., 1948), I, 14, 10, 51, 50–51.

[2] A cross-section of people whose last names begin with "Fa" will presumably have less bias in nationality and religious background than one which might be drawn from many other combinations of letters. Subsequent comparisons of *Time*'s sample with Census Bureau figures indicated that religious groups were represented in the proper proportions; similar data were not available for nationality groups. Comparisons between those who returned the questionnaire and those who had to be interviewed indicated that the questionnaire returns may be considered "representative" on most important factors.

[3] The results of a similar survey by *Time* in 1940 were published in *The U.S. College Graduate*, by Lawrence Babcock.

tion of several scales, or groups of questions, for inclusion in *Time*'s questionnaire. Two of these scales were designed to measure citizenship activities, and four were designed to measure various opinions related to citizenship. What I tried to do was to develop some very simple and short yardsticks for estimating the quality of citizenship exhibited by college-educated men and women.[4]

DEVELOPMENT OF THE ACTIVITY SCALES

The two activity scales were labeled "Politics" and "Civic Affairs." The manner of their construction was similar to the construction of psychophysical scales. Take the scale of political activities as an example. What are some of the activities which adults might engage in, activities which would signify their level of participation and interest in this important aspect of citizenship? Obviously, they could vote, they could read about political events in the newspapers, discuss political issues with their friends; some might write letters to congressmen, sign petitions, give money, collect money, run for office, or do a host of other things. Some of these activities would be more revealing than others. Together with several faculty members in public administration, political science, economics, and sociology, the author wrote statements of such activities on cards—twenty or thirty of them. We tried to cover a range of activities, including ones which were quite common and easy to do and others which were uncommon, required considerable effort to do, and thus implied a more intense interest or level of participation. Then we tried to arrange these statements of activity in sequence from easy and commonplace to difficult and requiring considerable effort. We arrived at a group of eleven statements, each of which was judged to be important as a citizenship activity. The total pattern of activities chosen was such that participation in the more difficult activities would tend to subsume or take for granted participation in the easier activities. This became the scale of political activities. The scale of civic activities was developed in like manner. The adults who ultimately responded to these scales or check lists merely marked an *X* before each activity they had engaged in during the previous year. The score was simply the number of activities checked.

DEVELOPMENT OF THE OPINION SCALES

The four opinion scales were labeled "Politics," "Government," "Civic Relations," and "The World." For these scales we wanted to write statements the answers to which would reflect some understanding or grasp of important objectives of instruction. What are some of the goals of general education for citizenship? Certainly, the good citizen in a democracy should believe in the importance and value of individual and representative participation in political affairs. He should have some insight into the nature of democratic government —its political and economic bases, its potentialities and hazards, its rivals both domestic and foreign. He should believe in equality of opportunity and treatment for all men, love his neighbors, not look for scapegoats, and recognize that the way he treats his children is not unrelated to problems of group relationship and responsibility which confront adult society. He should be world-minded, recognizing that internationalism is given reality through economic policies, tariff policies, and immigration policies, and that those who have the most must be prepared to give the most toward the ultimate establishment of world government and peace. These are the broad objectives which we considered in preparing the opinion scales. There are, of course, other objectives; and lists of goals may be classified in many ways, long and detailed or broad and brief. Although we might wish to include other objectives, it is probable that few educators would disagree with the importance of those which have been stated.

Each opinion scale consisted of six statements designed to tap attitudes in relation to one of the four broad objectives described above. Originally, we had a dozen or more statements for each scale; but, again, through informal discussion with educators and other social scientists, we selected six which we thought best

[4] The idea of developing a series of opinion and activity scales, as an improvement over the usual sort of questionnaire follow-up study, occurred to me during the winter of 1947. That spring and summer I had a chance to pre-test the idea in a follow-up survey of American University alumni. I am indebted to President Paul Douglass for this opportunity, and to several members of the faculty of American University's School of Public Administration for help in developing the first group of items. Many of these original items were subsequently revised in the light of the trial results obtained. Further modifications were made and several new items written for the *Time* magazine survey. The advice of William P. Tolley, Paul H. Appleby, and Maurice E. Troyer, all of Syracuse University, was particularly helpful in this task.

reflected the important objectives. We had one further criterion in choosing these statements: the experts must agree substantially among themselves in their responses to them. For example, if some experts agreed with a particular point of view and about an equal number of experts disagreed, then neither point of view could be accepted, and the statement expressing it had to be eliminated. Altogether, we had about forty experts—historians, economists, political scientists, sociologists, public administrators, educators, etc. These experts independently expressed their own opinions about the list of statements that we sent to them—checking "agree," "disagree," or "no opinion" for each statement. For every statement finally included in the scales, the degree of consensus among answers of the experts was greater than two to one, and for two-thirds of the statements the degree of consensus exceeded five to one. Therefore, it was possible to score the responses of college graduates to these scale questions to indicate their conformity with the judgment of experts. It is not necessary to argue that certain opinions are right or wrong, liberal or conservative, desirable or undesirable. What we have done, rather, is to demonstrate that certain opinions are shared by a preponderant number of experts and that these opinions reflect basic insights which are widely accepted as objectives of general education. Consequently, we can study the opinions of college graduates to see whether they are in accord or at variance with the judgments of the social scientists and educators. The score on each opinion scale is simply the number of items on which one's opinion agrees with the opinion of the experts.

Of course, experts may be, and on occasion have been, wrong in their judgments. The above paragraph sets out how these opinion scales were developed and how they have been scored. An illustration will show more clearly how the experts were used. In politics, one of the opinion statements was, "Sending letters and telegrams to congressmen has little influence on legislation." By a ratio of better than eight to one the experts "disagree" with this statement. To agree would imply a certain lack of faith in an important democratic process and would suggest a certain lack of knowledge; for the experts say that letters and telegrams do, in fact, have an influence on congressmen.

The validity of these activity and opinion scales rests primarily on the extent to which they sample behavior which is relevant to the objectives of education for citizenship. The case for validity, therefore, rests upon the content of the scales and how they were constructed. Beyond this, however, it is possible to report that statistical studies of the scales give further evidence of their usefulness as measuring devices.[5] These technical details have been summarized for publication elsewhere.

RESULTS OF THE SURVEY

Now let us look at the activities and opinions of college graduates. The two activity scales are reproduced in Tables I and II, followed by the four opinion scales (Tables III, IV, V, and VI). The percentages shown opposite each item are the responses of the national sample of graduates. The underlined responses in each of the opinion scales represent the viewpoint expressed by the consensus of experts.

What kind of a story do these figures tell? In political activity (Table I), most college graduates at least do the simple things. They read the papers and magazines, talk with their friends, listen to speeches, and vote in local as well as national elections. But here, for most of them, political activity ends. Less than a third signed any petition; less than a fourth sent any letter or telegram; less than a fifth contributed any money to a political cause. Less than 10 per cent had checked as many as eight items in the list; less than 20 per cent checked as many as seven items. The average college graduate checked five of the eleven activities. One out of ten graduates checked not more than two activities; and one out of five checked not more than three. A summary of these figures suggests that about 20 per cent of college graduates are politically active and 20 per cent are definitely inactive. In civic activities (Table II), a summary shows that 30 per cent of the graduates had checked seven or more of the items, 30 per cent checked three or fewer, and the average graduate checked about five of the eleven items.

There is an encouraging aspect, too, in this picture

[5] Scale analyses, item analyses, and item intercorrelations show that the grouping of items is internally meaningful and that the scoring is proper. Moreover, the scales have some reliability—the consistency of scores obtained by a sample of people who filled out the questionnaires a second time after a six-month interval being expressed by correlations of approximately .8 for the two activity scales and approximately .7 for the four opinion scales.

of civic and political activity. In the total adult population only about 55 per cent have bothered to vote in recent national elections. Among college graduates, 79 per cent said they voted; and almost as many voted in local or primary elections. In community affairs, one out of four college-educated adults taught or helped in other ways some group of young people such as the Boy Scouts or Y.M.C.A. And one out of three college graduates served on a volunteer committee for some community enterprise.

Looking at the opinion scales, we see that, in politics (Table III), the opinions of a majority of college-educated men and women agree with those of the experts on most items. This is also true in the scales concerned with civic relations and international relations. On a few items they disagree with the experts. They do not trust the public's judgment as deeply as they might. They do not see that pressure groups are of the essence of representative government—although the term "pressure groups" may have an unpleasant connotation. They do not agree with the experts (psychologists and educators in this instance) about discipline for children. But, on the whole, most college graduates believe that political participation by individuals and groups is both important and effective.

TABLE I

Political Activities

	Per Cent
During the past year:	
I followed current national and international events in the newspapers daily and magazines weekly	91
I discussed political issues with my friends	87
I voted in the last national election (1944)	79
I listened at least once a month to speeches and discussion programs on the radio dealing with national and international problems	73
I voted in the last primary or local election	71
I signed a petition for or against some legislation	30
I wrote a letter or sent a telegram to a public official	23
I contributed money to some political cause or group	17
I read one or more books about politics	16
I ran for or held an elective office within the past four years	6
I collected money for some political cause or group	3

TABLE II

Civic Activities

	Per Cent
During the past year:	
I followed local events regularly in my newspaper	88
I gave money to the community fund or chest	87
I talked with my neighbors about practical ways in which our neighborhood might be made better—for example, cleaner, pleasanter, friendlier	50
I belonged to a labor union, businessmen's organization, or professional society	49
I attended meetings of some local civic group	48
I was a member of a community organization such as Parent-Teachers Association, League of Women Voters, Citizens Association	40
I served on a volunteer committee for some community service	35
I had some contact with a local official about a local civic problem	30
I collected money or carried a petition for some local civic cause	27
I taught, or helped in some other direct way, a volunteer young people's group, such as Scouts, Y.M.C.A.	26
I wrote a letter to the newspaper about some community problem	8

TABLE III

Politics

	Agree (%)	No Opinion (%)	Disagree (%)
Sending letters and telegrams to congressmen has little influence on legislation	24	14	62
Political parties are run by insiders who are not concerned with public opinion	20	14	66
When the public is really concerned about an issue, its judgment is usually correct and unassailable, no matter how complex the issue*	28	10	62
In some elections there is not much point in voting because the outcome is fairly certain	10	12	78
Pressure groups are useful and important features of representative government	36	15	49
On most issues, we should expect our representatives to vote according to their convictions, even though they may not always reflect the opinion of their constituents	58	7	35

* A majority of the experts did not answer "agree" to this statement. A few of our experts, however, argued eloquently for the basic validity of the public's judgment—when the public is "really concerned" about an issue. In a later follow-up study of Syracuse alumni we revised the statement to make its intent clearer. The response which has been underlined is the one which was scored as "desirable." An item analysis of the scores on this scale indicates that the statement is scored properly.

They believe in equality and fair play for people who are different from themselves. They are internationally minded.

It is on the subject of government (Table IV) that disagreement with the opinions of these particular experts is both sharp and extensive. The author's guess as to the reason for this wide difference is that the experts as a group bring to their reading of these statements a much richer background of meaning and connotation than the average college graduate brings. For example, most college graduates nod their heads affirmatively at the familiar saying that "The best government is one which governs least," perhaps thinking that the less interference the better. The experts, recognizing that Jefferson's dictum was quite valid in its historical context, nevertheless tend to doubt its validity as a guidepost for our modern, technological, and interrelated world; they were thinking, perhaps, that the sure preservation of liberty and democracy in today's complex society requires a more positive role on the part of government. More than three-fourths of the college graduates believe that democracy "depends fundamentally" on free business enterprise. The experts, apparently, understand democracy differently: they think of democratic forms which existed long before the evolution of entrepreneurs and the rise of industrial society as we know it in this country; they see "free business enterprise" diminishing in many countries of the world but democracy persisting; so they doubt that one "depends fundamentally" on the other. A majority of college graduates see no basic difference between communism and fascism. The experts draw a different conclusion from their reading of history and political philosophy: while there are many similarities, we would err, so the experts reason, if we

TABLE IV

GOVERNMENT

	Agree (%)	No Opinion (%)	Disagree (%)
The best government is one which governs least	52	13	35
Democracy depends fundamentally on the existence of free business enterprise	72	10	18
Communism and fascism are basically and historically similar	57	17	26
The most serious danger to democracy in this country comes from Communists and Communist-dominated organizations	55	10	35
Government planning should be strictly limited, for it almost inevitably results in the loss of essential liberties and freedom	51	13	36
Individual liberty and justice under law are not possible in Socialist countries	46	21	33

TABLE V

CIVIC RELATIONS

	Agree (%)	No Opinion (%)	Disagree (%)
All Americans—Negroes, Jews, the foreign-born, and others—should have equal opportunity in social, economic, and political affairs	80	7	13
Familiarity breeds contempt	28	16	56
Foreigners usually have peculiar and annoying habits	18	14	68
Children of minority groups or other races should play among themselves	7	7	86
Most children, these days, need more discipline*	76	8	16
Agitators and troublemakers are more likely to be foreign-born citizens than native Americans	32	15	53

* The experts here were a group of psychologists and educators. The historians, political scientists, *et al.*, did not agree with the psychologists and educators. But, again, subsequent item analysis of the results indicated that the statement was scored properly.

TABLE VI

THE WORLD

	Agree (%)	No Opinion (%)	Disagree (%)
We are not likely to have lasting peace until the United States and its allies are stronger than all the other countries	40	12	48
If we lower our tariffs to permit more foreign goods in this country, we will lower our standard of living	20	15	65
Deep ideological differences between countries are irreconcilable	26	16	58
If we allow more immigrants to this country, we will lower our standard of culture	19	12	69
The United Nations should have the right to make conclusions which would bind members to a course of action	78	12	10
Over the next decade, we must try to make the standard of living in the rest of the world rise more rapidly than in our own country	58	15	27

failed to recognize the different historical roots and the different forces which gave rise to these two doctrines. A majority of college graduates are apparently "scared" by the "Red scare." The experts think that there are more serious dangers to democracy in this country than the activities of a handful of Communists and their sympathizers—dangers, perhaps, such as civic apathy or increased economic concentration or failure to root up the breeding-ground of communism in economic depression, slums, discrimination, and other places of social ill. A majority and a plurality of college graduates, on the last two items in Table IV, fear that government planning and socialism mean the end of essential liberties and freedoms. The experts think that this is not necessarily so: perhaps they reason that even the conditions of freedom must be planned for if they are to be preserved; or perhaps they think of England, Australia, France, Sweden, Norway, and many other countries where government planning is much more extensive than it is in the United States but where essential freedom and liberty still exist, lively and vigorously. If the experts are right in all these opinions, we need much better teaching in our colleges about the role of government in society.

THE NEED FOR BETTER GENERAL EDUCATION

A few very elementary attempts have been made to examine the relationship between type of education and subsequent citizenship activities and opinions. For example, on *Time*'s questionnaire, 55 per cent of the graduates said that their college work had been "mostly generalized education," and 45 per cent said it had been "mostly specific training for an occupation." Comparing these two groups, the author found statistically significant differences: on all four opinion scales the pattern of responses of the "general-education" group was closer to the experts than was the pattern of the "specialized-education" group; on the political activity scale the general-education group checked a higher average number of activities than did the specialized-education group.

Differences of this same kind were found when the responses of graduates from seventeen technical schools (such as California Institute of Technology, Massachusetts Institute of Technology, Rensselaer, Rose, Georgia School of Technology, Case) were compared with the responses of Ivy League and Big Ten university graduates. While there were no significant differences between midwestern university and eastern college graduates in the average number of political and civic activities checked, both groups were significantly more active than were graduates of the technical schools. The same pattern held for the opinion scales—no consistent difference between midwestern and eastern graduates on the four scales, but both groups significantly higher (i.e., closer to the experts) than technical-school graduates on all four opinion scales.

It seems reasonably clear that liberal or general education, in comparison with education which is predominantly technical or specialized, is associated with (leads to?) a more active role in civic and political affairs and with opinions which more closely reflect the insights and beliefs upheld by educators and social scientists as goals of education for citizenship. Although none of the differences between these groups of graduates is large and there is much overlapping among all groups, it is fair to conclude, from the consistent pattern of the data, that these statistically significant differences also have educational significance.

Thus research lends its support to the current and widespread efforts in many colleges to bring greater unity of purpose and design in curriculums directly oriented toward the goals of general education for life in our times. For the technical and specialized colleges, the data give encouragement to the efforts of those who advocate that a broader band of general studies needs to be interwoven with the more specialized studies.

Intensive research is now under way to try to identify more fully and definitely the implications for curriculum development from the behavior of this representative cross-section of college graduates.

Meanwhile, there is little comfort for the complacent. If we hope that new generations of college graduates will play a more active role in political and civic affairs, we shall have to work hard in promoting that consequence. If we hope that new generations of college graduates will have a deeper insight into the nature of government and democracy in tomorrow's complex, uneasy world, we shall have to dedicate our attention and our imagination directly and wholeheartedly toward that goal.

A Theory of General Education

ANGEL QUINTERO*

THE DEVELOPMENT or evaluation of an education program is always guided by a set of principles. Such definitions of general education as "the kind of education everyone in a democratic society ought to have" or as "the transmission of the cultural heritage" or as "the development of the liberal arts" imply certain ethical, political, and psychological premises. They are determined by notions of human nature, the state, the learning process, and the content and relationships of the fields of knowledge. In other words, they contain a philosophy of education. As John Dewey has stated:

> There is probably no better way to realize what philosophy is about when it is living, not antiquarian, than to ask ourselves what criteria and what aims and ideals should control our educational policies and undertakings. Such a question, if it is systematically followed out, will bring to light things that are morally and intellectually fundamental in the direction of human affairs. It will disclose differences and conflicts that are basic in society as it now exists. It will give concrete and definite meaning to problems and principles that are remote and abstract when they are presented in terms of philosophical systems isolated from human needs and human struggles.[1]

This paper will state, explain, and defend a set of principles according to which a program of general education may be judged. This statement is not a dogma, since one of its principles is the fallibility of man and the difficulty which any one man or any historical period has in attaining complete perspective of knowledge. Its main aim is to open discussion and to provoke revision.

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[1] "Challenge to Liberal Thought," *Fortune*, XXX, No. 2 (August, 1944), 155.

MAN AND SOCIETY

That education requires a conception of man and society is evident, since the end of education is the perfection of man, and man is a political animal.[2] However, men hold different conceptions of man and society.

How is a conception of man and society developed? There are three important sources for such conceptions. In the first place, all societies have in their culture, as a part of their tradition, an ideal of man and society. In many undeveloped cultures this is the sole criterion for developing educational practices. In fact, it is very difficult in such societies to differentiate culture and education. A second source closely connected with the first is the observation by individuals of their acts and those of their fellows. Such a second source characterizes Western civilization, where scholarship and criticism serve to make us conscious of our culture. In Western civilization there has grown out of these two criteria a third, that of rational discussion and experiment. Out of such methods bodies of knowledge, termed "sciences," have grown. These sciences start from nature, custom, and tradition and try to find meaning and order in them. Their products can be used in two ways in forming a conception of man and society. They contain knowledge about man and society. They

[2] Man is an animal perfected only in society, that is, his capacities are there completed to the utmost that his nature and his culture permits. Cf. John Dewey, *Logic* (New York: Henry Holt & Co., 1938), p. 43: "Man, as Aristotle remarked, is a social animal. . . . [H]is activities are encompassed in an environment that is culturally transmitted, so that what man does and how he acts, is determined not by organic structure and physical heredity alone but by the influence of cultural heredity, embedded in traditions, institutions and the purposes and belief they both carry and inspire."

are also examples of man's achievements. In this second respect they belong to a broader field, including languages, poetry, and the arts, which are themselves evidence concerning the nature of man and society.[3]

A first generalization may be drawn from these sources. Man is a distinct animal, the only animal that makes sciences, philosophy, history, languages, poetry, and art. A common attribute of all these activities is that they involve abstraction from particulars. It may be said that man is distinguished by this capacity. We call this capacity "reason." It is in this sense that we may call man a "rational animal"; the term should not be taken as connoting the absence of nonrational traits in man or as suggesting the universal sovereignty of reason.

This does not mean that all actions or most actions of man are rational. Common observation, historical experience, and psychological evidence deny this. Man is a physicobiological organism; he partakes of all activities of simpler living bodies—he grows, moves, and deteriorates. He is also an emotional being—he loves, fears, hates, and desires. There is sufficient agreement about the validity of this tripartite distinction of man's capacities into rational, biological, and emotional. It should also be clear that this distinction does not mean that these capacities are isolated. Man acts as a whole. In his activities the biological, the emotional, and the intellectual cannot be separated. There is, perhaps, a hierarchy in these activities. That is, there are certain biological processes, like digestion, that may not involve any intellectual processes or conscious feelings; but, for such emotional activities as anger and fear, a biological structure and certain biological processes are needed. For thinking there is the need of feeling and emotions and the need of a biological structure, and for rational thinking, above all, biological structure, feeling, and emotion go hand in hand with reason.

A second important statement partly derived from tradition and partly derived from modern science is that of the fundamental equality of man. There are differences in the physicobiological, in the emotional, and in the rational capacities of men. But these are differences of degree. One man may be five feet six inches, while another may be six feet, some may weigh more, some are more courageous, some are more intelligent, but all partake of the same structure and processes.

A third important conclusion derived mainly from psychological and sociological studies is that the differences between adults are not due only, or mainly, to inherited differences—differences in nature—but to differences in culture and education. This indicates a second difference between man and other animals. The capacities of man are flexible, there is great plasticity in man's nature. As a result of culture and education he forms a second nature.[4]

CULTURE AND EDUCATION

If it is agreed that there are three types of capacities in man—the physicobiological, the emotional, and the rational—and that the development of these potentialities depends upon the experience of the developing organism, there should be little difficulty in accepting the following two statements: (1) The end of man is the most complete development of his capacities; (2) the means for this development are nature, culture, and education.

Let us begin by discussing the development of the physicobiological aspect of man. The end here is health. The biological sciences have established certain

[3] We stress here the double relationship between science and the humanities. Science as a product of man's powers is a part of the humanities. The humanities as a manifestation of man's acts can be used as the materials of science. For example, a social anthropologist uses humanistic works as materials for formulating a hypothesis on the nature of culture.

[4] Nature, culture, and education are, as will be argued later, the three means for perfecting man. They are not three separate independent parts in the life of man. Nature is what is given, in whose creation man has had no participation. As Clarence H. Faust said in an unpublished paper presented to a seminar on the integration of the social sciences at the University of Puerto Rico in the summer of 1948: "Nature consists of those things which come into existence, and undergo change, not as the result of man's thought and will, but by the operation of forces independent of man's desire and contrivance. Man may channel these to his own purposes, but he does not create them. He may employ atomic energy to serve his ends, but he does not determine the laws of its operation." Culture includes all things which man, a natural being, has created out of nature. Houses, automobiles, laws, science, language, philosophy, art, and poetry. Education is a part of culture. In a wide sense culture and education are not distinguished. Man develops his capacities by participating in a culture. But we can use education in a more restricted sense. In the more developed cultures there is a rational, planned effort to transmit the tradition and to improve it—to affect nature and to form and transform culture. We refer to these activities as "educational." They are an organized source of change within a culture.

requirements for attaining health. In spite of the development of quite precise notions of the biological nature of man in general, the specific nature of individuals can be only roughly determined. When a child is born, his weight and height as an adult can be predicted only approximately. But it is hoped that, if the regimen of diet and exercise recommended by science is followed, the maximum of his physical potentialities will be achieved.

An analogy can be established for the emotional and rational powers. There is need of certain prescribed requirements, determined by science and achieved through "exercise" and "diet." However, there are important differences. In the first place, proper development of the emotional and intellectual aspects of man require the development of the biological powers. A person may be emotionally unbalanced because of improper development of his endocrine system or because of vitamin deficiency.[5] Another difference is that culture and education cannot be controlled as food and exercise are controlled. For a specific child, the culture is given. Education always depends on culture. The results of culture and education can be seen only gradually and slowly. They cannot be measured as easily as physical-biological influences can. There are more contingent and accidental factors. There is also a difficulty in setting standards of measurement, for these standards involve the values embodied in the very culture being measured.

A special problem for education arises from the interrelationship of education and culture. The aim of education is to perfect man, but education is a part of culture, which is dependent on perfected man. Furthermore, in modern society education is controlled by one cultural institution, the state. It is probable, therefore, that education will reflect the conditions of the state. How, then, can it perfect man?

This is a dilemma that cannot be escaped. Education will reflect the conditions of culture, and particularly the conditions of the state. Part of the answer to this difficulty was given before. Although man is a part of culture, he can study culture in the same way that he studies nature although he is a part of nature. One of the aims of education is precisely to study culture critically, applying to it the methods of science. But to make this possible to the greatest extent, the state must be organized democratically. That the state must be a democracy is implied also by our concept of man. If men are equal, rational, and fallible, democracy is the best kind of government. It is also the best because it provides a method of rational and gradual improvement. It also provides the adequate media for developing man, since his development depends on the exercise of his powers.

[5] If this is so, there are two important implications for education: (1) education cannot be developed properly without a certain minimum of health; (2) still more important, education cannot take place until there is a certain biological maturity that makes it possible.

THE SPECIAL ROLE OF GENERAL EDUCATION

The term "education" is frequently used in three different ways. There is a conception of education in which no clear distinction is made between nature, culture, and education. In this case education is identified with all processes, natural and cultural, that contribute to the perfection of man. It is still more common to identify culture and education. In this view the family, the community, the church, and the state are called "educational." A third possibility is to limit education to the work of the schools. This is the position of this paper.

The schools have three different aims: to transmit culture; to interpret critically; and to develop culture. These aims present three different tasks which delimit roughly the fields of elementary, general, and higher education. The main task of elementary education is the transmission of culture; that of general education, the critical interpretation of culture; and that of higher education, the advancement of culture. The elementary schools will transmit the language, history, and values of the group. It will also provide the basic tools of learning: reading, writing, and mathematics. Higher education will be mainly concerned with research, advanced studies, and professional education.

General education is to interpret culture critically. This statement must be understood in the light of several principles about education already discussed. Education was defined as one of the means of perfecting man. Man's powers were divided into the physico-biological, emotional, and rational. Furthermore, the task of the schools was differentiated from that of nature and culture. The schools must, therefore, have a

special task in the perfection of man's powers. It will be noted that there is provision in culture for the development of health and for the training of the emotions. For the development of the rational powers Western culture turns to the schools. This task is, therefore, the main objective of the schools. The provisions of culture may be imperfect. Education will also, probably, be imperfect. It is one of the tasks of education to discuss rationally these questions and provide for gradual improvement.

There are several possible misconceptions concerning the statement that the main task of the schools is the development of the rational powers. In the first place, it does not mean that the rational is a separate power in man. It does not mean, either, that the rational powers will be developed solely by the schools. Finally, it does not mean that the schools should not pay attention to the development of the emotions and health.

These are misconceptions, since, as said before, man acts as a unit and society acts as a unit. Furthermore, the schools will provide for intellectual discussion on matters pertaining to health and values, as, for example, readings in biology, psychology, and ethics. Knowledge of these matters will affect the student's attitudes about them. Also, provided that the main task is not interfered with, there is no reason why the schools should not provide opportunities for health services, lunchrooms, athletics, and recreation.

However, the particular circumstances of the school as an institution should not be forgotten. The school exists among other institutions—the family, the church, the municipality, the government—and within a definite sociological and economic organization. It is created and sustained by the state. Its teachers are a product of the culture in which it exists. They are also members of these other institutions. Furthermore, the schools have children for a limited amount of time, not more than a third of their time, during the ages of about six to eighteen. It is within this framework that the school works. This framework sets its possibilities and its limitations. The first important question for schools, therefore, as has been very well stated by José Ortega y Gasset, is that of economy.[6] That is, among the many things it may do, which should it do first in its limited time, within its limited province?

Even with a general understanding of the task of education to develop the rational powers of man, the particular meaning of rational powers and the manner of their development remain to be discussed. There are two ways to go about these questions. One of them has been stated before. It is to take the great expressions of these powers and look for the excellences that they illustrate. Great works of philosophy, of sciences, of literature, of art, and of statesmanship would be examined for this purpose. A second method would be to examine statements defining the intellectual powers. An examination of such works and statements shows that there is considerable agreement that attention should be given to the following critical powers: (1) the capacity of proper and correct expression in oral and in written language; (2) the capacity to distinguish between things, symbols, and concepts; (3) the ability to draw valid conclusions from given premises; (4) the ability to explain particulars from general laws and to infer general laws from particulars; (5) the capacity to see a pattern of relationships and to grasp the meanings in a changing pattern; (6) the capacity to form a mental picture of a thing, event, or situation which is either past, expected, or merely created; (7) the capacity to make an appropriate judgment of the excellence of an investigation or exposition in the field of the natural and social sciences, and to understand the principles involved in inquiry in these fields; (8) the capacity to judge properly a work of art and to understand the principles involved in making a work of art, where "art" is to be understood as comprising music and literature as well as the plastic arts; (9) the capacity to be aware of practical implications of facts and to apply ideas to practical problems; and (10) the capacity to raise questions about fundamental assumptions and problems of human knowledge and to look at knowledge as a whole.

There is also sufficient agreement on the method of developing these abilities. It consists in practicing them. Education should provide experiences that involve these activities. Their practice should be gradual. It begins very early in childhood. It should always be appropriate to the biological, emotional, and intellectual development of the child. It should always begin with the student's actual experience and with his pres-

[6] *La Mision de la universidad* (Madrid: Revista de Occidente, 1947), pp. 329–34. Cf. Robert M. Hutchins, "The College and the Needs of Society," *Journal of General Education*, III, No. 3 (April, 1949), 175–81.

ent interest. Finally, it would be ideal if they could be practiced in an environment providing for free expression and security. Psychological and educational research will provide the main guidance in these respects.

To a large extent the development of these capacities takes place in early childhood and in the elementary school. For example, curiosity and imagination will be developed or hampered according to the activities and readings in which the child is engaged. But the college has a responsibility for their development as well.

In many respects the period of general education is the final stage in the process of public education. For most students it will be the end of their formal education. If, as we have contended, the great works of philosophy, science, history, literature, and art are major expressions of man's capacities, the student should come into contact with them. This is not only because of the content of these works but because, for understanding them, students employ and practice those abilities that the works exemplify. These works illustrate the activities of great minds. In the process of understanding them, the student's mind must go through such activities. This process will contribute, according to our previous principles, to the development of the student's capacities.

There are two other reasons for using original works as the material for study. In the first place, these works are examples of critical discussion. They represent arguments against other points of view prevalent when they were written. Those that are relatively modern, like Marx, Dewey, Einstein, and Freud, represent challenges to the more traditional views which the students hold. They give a critical analysis of modern culture. These works, therefore, contribute to the main aim of general education.

Second, general education aims at teaching students to "learn how to learn." This is done by developing in students the methods of science and the humanities. However, method and content cannot be separated. What a scientist does cannot be learned by merely reading about it. Courses in "the scientific method" are in this respect very questionable. What science is, is best seen by example, in the actual records of scientific investigation themselves. Thus one both avoids vague generalities about science and sees the method of science specific to and in action upon real scientific problems.

MODES OF ORGANIZATION

The ends of general education have been stated in two ways. In the first place, general education should interpret culture critically. In the second place, it should perfect the rational powers of man. It is evident that these two objectives are interrelated. For interpreting culture critically, man needs the knowledge and ability to do so. He gains the ability, the perfection of the rational powers, in the process of acquiring the knowledge. They are related in a second way: it is only when culture has developed to a certain stage that it provides for the development of the rational powers. It is also through the development of the rational powers that culture perfects itself.

The means of general education have also been suggested as the reading of great works of the intellectual disciplines and the examination of great works of art. But in the organization of the material three different patterns could be followed. One is illustrated in practice by the organization of the College of the University of Chicago and another by St. John's College. If Sarah Lawrence College used original works to a greater extent, it would illustrate a third pattern.[7] In the College of the University of Chicago the curriculum is organized around courses in the different fields of learning. There is a sequence of courses in the humanities, one in the natural sciences, one in the social sciences, and two courses in mathematics and languages. Finally, there are two courses that attempt integration, one through philosophical and the other through historical media. In St. John's College the curriculum is organized around a nucleus of fundamental works. Although there is separate work in the sciences and in language, the difference between the fields of knowledge is minimized. Sarah Lawrence poses another problem. Although there is a traditional offering of courses, the main emphasis is on the needs and interests of the students. Ideally the student is free to pursue, under proper guidance, the activities which she prefers. As in the case of St. John's, there is a minimum emphasis on the differences between the disciplines.

Briefly, the main difference between Chicago and St. John's is the emphasis on subject-matter distinction. St. John's considers these distinctions insignificant, em-

[7] The following descriptions are necessarily oversimplified, since their main purpose is only to illustrate these three different approaches.

phasizing rather the wholeness of knowledge and the unity of method. Sarah Lawrence, too, minimizes these distinctions but, instead of starting from content, starts from the interests of the student.

There are two arguments in favor of the organization of the College of the University of Chicago. One is of a theoretical nature, the other practical. It can be argued that there is sufficient difference between the natural sciences, the social sciences, and the humanities to justify separating these disciplines for teaching. It is common-sense experience that one can distinguish a natural scientist from a poet, and both from a social scientist. There is enough difference between Newton, Dostoevski, and Karl Marx. There is also enough difference in the subject matter of these disciplines. The materials that the natural scientist studies could be roughly distinguished from those studied by both the social scientists and the humanists according to the distinction made previously between nature and culture. The social sciences and the humanities study objects in whose creation man has participated. There are two kinds of these objects. One kind is always in flux, continually in the process of creation (or deterioration), like the state, the family, and the political party. These are the social objects; society in general is their creator. The other group is finished when created, like a cathedral, a painting, or a play. In that respect they are the products of individual creators, of individual men. The first group constitutes the objects of the social sciences, the second those of the humanities. Of course, there are interrelationships among all these fields. All are the product of men and emerge out of a common reality. There should be, therefore, provision in the curriculum for the study of interrelationships.

The second argument for the separation of these fields in the curriculum is of a practical nature. Traditionally teachers have been trained in the separate fields. It is very difficult to find persons with an adequate general view, even in one of the special fields. One of the urgent problems which general education faces is finding trained personnel. Furthermore, the possibility of training many people in all the fields adequately enough to teach them is doubtful.[8] Those few that can be trained should be reserved for leadership in the integration courses. However, even these courses gain in perspective by the participation of teachers specially trained in the separate fields. There will be, of course, gradual improvement, as a result of long participation in general education programs. More people will acquire general training. However, this should not be expected for many years. In the meantime it is important that faculties be adequately trained in a special field and have also sufficient interest in other fields to grasp their main problems.

This general attitude toward the organization of knowledge has a corollary which points to another important difference between such programs as those of the University of Chicago and Sarah Lawrence. The University of Chicago admits that, in teaching, different approaches to the fields of knowledge are needed because of differences in the disciplines of these fields. There is also the assumption that sufficient agreement is reached by the specialists about which aspects of their fields are relevant and necessary for general education and how these aspects should be taught. Although Sarah Lawrence does not make these assumptions, this does not necessarily mean that a program making them must ignore the main emphasis of Sarah Lawrence, namely, adequate attention to the psychological needs and interests of the students. It is possible to meet needs and interests by the adequate training of the staff and proper teaching procedures. It is also possible to consider individual differences. However, the extent to which individual differences can be considered is limited by the amount of time and personnel available for educational purposes. Also in considering individual difference it should not be forgotten that students entering general education programs have had much common experience as a result of their participation in a common culture and common schooling.

FROM GENERAL PRINCIPLES TO COURSES

There is no doubt that teachers are as important as materials in the process of general education. Development in the student of the arts of knowledge is not produced automatically as a result of the contact of the student with great works. It needs the guidance and stimulus of the teacher. This means that the teacher himself must possess the liberal arts. If not, he may be a hindrance instead of a help. The teacher must also know the processes of developing the arts in the student. The possession of the arts helps in this respect,

[8] Because of the limitations of man and the vastness of knowledge.

but it is not enough. The teacher must have deep psychological insight, obtained as a result of thorough knowledge of different psychological positions and of modern psychological research on child growth and development. These two activities—general education and psychological training—should be the core of teacher-training institutions.

On general education and psychological training will depend the power of the teacher to formulate actual courses of instruction. Although the formulation of courses depends on such circumstances as the nature and number of the staff and of the student body, several general principles are possible.

In the first place, courses in general education that are given by a group of instructors should be developed by this group co-operatively and should be revised continuously by them. This leads to the gradual improvement of the course and furthers the training of the staff. It is also the best way to develop unity in the course. Courses developed by a single member of the staff have apparently more unity; but, when they are taught by the various instructors, different approaches and even interpretations are given to the course. These differences can be greatly clarified by discussion. There is also the fact that teachers will find more meaning and more interest in their work if they participate actively in the formulation of their courses. Furthermore, the best judges of the adequacy of materials are those who deal directly with them in the classroom. Finally, if the discussion is properly conducted, the courses may become a learning experience, a continuous seminar for the teachers. This is of great importance. It has been stated before that one of the major difficulties of general education is the lack of trained personnel. These seminars may greatly help the in-service training of teachers and their continued general education.

A first step in this process should be the clarification of objectives. The staff should be able to express those objectives in terms of behavior of students, that is, by examples of changes in their ways of acting. They should also be able to express them in terms of materials and methods. This is a continuous and arduous process. The discussion of materials and methods will bring light on the objectives and vice versa. Joseph J. Schwab gives an excellent illustration of this process in the following paragraph describing similar efforts on the part of a natural sciences staff:

> The level of good will was so high in the group, however, that rather than beg the question of the nature of science or disband in material dissatisfactions, it was agreed to proceed on the assumption that a better view of the strengths and weaknesses of our respective positions could be obtained if they—or something like them—could be examined, not as our own creations, but as the products of professionals in the field of methodology. This was undertaken. We attempted to lay aside for the time being our own conception of science and admit to consideration the doctrines to be found in a wide selection of documents by scientists and philosophers on the subject of the nature of science. We proceeded as students not as professors. Our first task in each case was to attain clarity and agreement as to the meaning of the document under our consideration; our second task was to defend the author's view (whether we felt agreement or not) by citation from our own experience of examples of scientific research, and a demonstration that these examples could be accounted for in part or in whole in the terms of the author we were considering; our third task was to find in our adduced examples the matters or aspects which escaped the author's terms or apparently gave the lie to his formulation. This third task became easier as our reading became more extensive, since then, the terms of authors previously read pointed to aspects or matters which escaped treatment in the terms of the author under present consideration, and he in turn highlighted omissions by previous authors.[9]

A second important problem is that of subject matter. This problem involves the choice of aspects of a given field of knowledge which will be emphasized and the selection of readings for the teaching of these aspects. This is a process closely related to the determination of objectives and greatly aided by it, but it is a different process. For this purpose the knowledge of subject-matter specialists is very valuable, especially if they know the aims of general education.

Finally, there should be constant revision of any scheme adopted. In this respect the evaluation of the program is indispensable. It is the only way to be sure how far the objectives are being achieved. Evaluation will be facilitated by a clear statement of objectives expressed in terms both of changes in behaviors and of subject matter. It will also be greatly helped by the continuous discussion of the staff. It must be a continuous, slow process, working with all other aspects of the course for gradual improvement.

[9] "The Science Programs in the College of the University of Chicago; The Three Year Program: Its Foundations," in *Science in General Education*, ed. Earl J. McGrath (Dubuque, Iowa: William C. Brown & Co., 1948), p. 72.

Developing a College Placement Test Program

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SINCE THE reorganization of the College of the University of Chicago in 1931, placement tests of some kind have been given new students during the orientation week to assist their advisers in planning appropriate programs of study for them. The first tests were essentially predictive instruments and were of value in helping a student to decide whether he should take a particular course in his first or second year of the College, how heavy an academic load he could successfully carry, which of the fields of specialization he might plan to enter, and which elective courses he should take. But with reliance on comprehensive examinations—rather than course credits—as the measure of achievement and the provision of a single, sequential required curriculum which students were permitted to enter after two or more years of high school instead of after four, the value of predictive tests was greatly reduced. On the other hand, placement tests which could be used to determine the appropriate level at which each student should start his work became necessary.

Curriculum changes at Chicago were an expression of the belief that the College should offer students the kind of general education which is desirable for everyone, whatever occupation or profession he expects to enter. Such an education should provide information concerning major achievements in the various fields of knowledge; it should lead to an understanding of the methods of acquiring knowledge, of reaching and testing conclusions; and it should, above all, develop habits of thinking which will make the student competent to form sound judgments concerning the problems that he will face as a man and a citizen, and which will lead him to act intelligently with respect not only to his private interests but to those of society as a whole.[1] To achieve these major objectives, a series of general courses has been developed. Each course is intended to help the student acquire certain intellectual abilities and skills as well as specific knowledge.[2]

Although the courses are provided to help students develop the types of competence regarded as important by the College, the requirements for the Bachelor's degree are stated in terms of the comprehensive examinations (up to fourteen in number) which the student must pass. Most students prepare for the examinations by doing the work of the course; a student may, however, prepare for the examinations by independent study. Whenever the student is of the opinion that he has completed his preparation in a subject, he may take the regularly scheduled comprehensive examination. The nature of the comprehensive examination program places emphasis on demonstrated competence rather than on the amount of time the student has spent in class. It seemed reasonable to the faculty, therefore, that it should properly consider to what extent students possessed the desired competence when they entered the College.

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[1] University of Chicago, *Announcements, the College and the Divisions, 1948–1949*, p. 39.

[2] These year-long general courses consist of one course in writing, three in the humanities, one in general language problems and a foreign language, three courses in the natural sciences (a two-year science program is available to students entering after the completion of secondary school), three courses in the social sciences, a course in mathematics, a course in the history of Western civilization, and a course on the methods and relationships of the various fields of knowledge.

From 1940 to 1943, various faculty groups discussed several problems connected with the placement of entering students. Where, it was asked, should a student start his work in the social sciences—in the first, second, or third course of the sequence? The record of the student's previous academic work was not very useful in answering this question, since grades from different institutions mean different things and since it was impossible to determine the equivalence of the College courses with courses having the same names in other schools. The faculty pointed out that students are not required to attend classes in the College and that some students are able to demonstrate adequate performance on the comprehensive examination without such formal class attendance. Would it not be possible for entering students to have a competence exceeding that revealed by the academic records which they present? The faculty was also concerned with the great range of ability of students within a particular College course. Although each of the general courses involves a year of work, the faculty recognized that some students could probably complete the examination requirement satisfactorily with less than a full year of study in that course.

With these problems in mind, the faculty, in the spring of 1943, recommended that students be placed in the College program on the basis of competence demonstrated on tests in each of the subject fields. A placement test committee, consisting of representatives of the various instructional staffs and members of the University Examiner's Office, was appointed. As the committee worked on the problems in this field, it became increasingly aware that the nature of the placement testing program, the kinds of tests to be used, and the ways in which the results were utilized would be determined by the educational philosophy and academic program of the College. A placement testing program was fundamentally necessary because the entering students were heterogeneous with respect to educational and experiential background and because the College emphasized the level of achievement attained rather than the means by which it was attained.

HETEROGENEITY OF STUDENT BODY

If all the students have very similar educational backgrounds, there is little reason for a placement program. If, however, students have come from a great variety of schools, reveal little uniformity in the pattern of courses they have had, and differ with respect to the kind and extent of independent reading and studying they have done, it is difficult, if not impossible, to determine precisely from records of previous academic work the level of the student's competence or the point at which he should begin his advanced work.[3]

Many of the difficulties encountered in the appraisal of the student's previous background and training have been recognized by colleges throughout the country. Recently, consideration of these problems was stimulated by the necessity of insuring that veterans were properly placed. Veterans have, in many instances, taken correspondence courses or studied many different subjects in special training programs. Seldom have these courses been the equivalent of the usual college courses, and academic institutions have had difficulty in assessing the educational value of such varied study and experience. Some schools have met this problem by developing special placement tests, while others have made use of standardized achievement tests, such as those prepared by the Cooperative Test Service and by the examination staff of the United States Armed Forces Institute.

The placing of students on the basis of records of courses taken elsewhere assumes a similarity of courses between one school and another. It assumes that, if a student has had a course with a particular name at a previous school, it is the equivalent of a course with a similar name at the school to which he is applying. The principal defect in any appraisal of scholastic records as the basis for placement of students is that courses may and do vary considerably. In addition, it disregards the fact that a record of completion of a course at some

[3] The lack of meaning and the great variation in student accomplishment were clearly demonstrated by Wood and Learned, who found that the examination performance of the best Seniors in some of the Pennsylvania colleges was poorer than that of the poorest Seniors in other colleges. Not only did they find such great variation between schools, but within many of the schools they found considerable variation among the students at each level and even considerable overlap between the performance of students entering the Freshman year with those completing the Senior year of college (W. S. Learned and Ben D. Wood, *The Student and His Knowledge: A Report to the Carnegie Foundation on the Results of the High School and College Examinations of 1928, 1930, and 1932* [Bull. 29 (New York: Carnegie Foundation for the Advancement of Teaching, 1938)]).

time in the past is no guaranty that the student still possesses the competence which the course was presumed to have developed. Moreover, it does not take into consideration the possibility that a person lacking some formal educational experiences may have acquired an equivalent competence by other means.

Students enter the College of the University of Chicago after having attended any of several hundred schools and after having completed from ten to fifteen years of schooling. Although most students enter directly from other schools, many have been out of school for a number of years—some after several years of military experience. Some are as young as thirteen, while others are thirty.[4] The problem of assessing previous educational experience is further complicated because the general courses in the College are quite different from the usual courses that the student may have had in secondary school or college. It has been impossible to relate the student's experience in various combinations of courses taken in other educational institutions to specific requirements in the College.

EMPHASIS ON DEMONSTRATED COMPETENCE

In addition to evidence of achievement, such as final examinations, term papers, and level of class work, most schools place emphasis on class attendance as a requirement for certification. Few schools will permit students to submit evidence of achievement if they do not meet the minimal requirement of class attendance. This requirement usually involves the assumption that the competence required for graduation can be achieved only if the student has a prescribed set of educational experiences. It also involves the assumption that there are important outcomes of education which are not readily defined and included in the more explicit evidences of achievement represented by examinations, term papers, and the like.

Since the requirements for graduation in the College of the University of Chicago had been stated in terms of comprehensive examinations, the principle of placing emphasis on the level of achievement rather than on the means of developing such achievement were established. The comprehensive examinations do, however, tend to contain many questions and problems which are specifically related to the particular courses in the College. A student who had previously acquired equivalent competence but who was unacquainted with the specific formulations of the problems, the particular readings, and the exact details of the subject matter dealt with in a College course might not be able to pass the comprehensive examination. If he were held for the comprehensive examination, he would usually have to go through a specific set of educational experiences—whether he needed them or not to complete this general education. On the other hand, it seemed possible that tests could be constructed which would give all students an opportunity to demonstrate the major understandings, intellectual abilities, and skills emphasized in a course, even though they have not acquired these as a result of instruction on the specific materials used in the College.

In the early years of the placement test program the placement committee was not willing to abandon completely consideration of the amount of previous schooling that the student had had. In large part, this was because it did not have complete confidence in the results of the placement tests. It was also a reflection of its belief that the number of years of school attendance make a difference, whether reflected in demonstrated achievement or not. Several members of the placement committee argued that even though an eleventh-grade student could demonstrate satisfactory achievement over the first course in a subject field, he was too young to take the second course and, therefore, should enter the first course in order to secure whatever the course might offer for his further growth. Some also held that to require older students to take the full four-year program of the College would be to require too much of them and that some compromise should be effected in order to reduce the amount of time such students would need to meet the requirements. As the placement program has developed, there has been more and more emphasis on achievement; and, at present, in only three of the fourteen requirements is any attention given to students' previous scholastic records.

The committee also recognized that a placement program could operate effectively in the College because instruction is intended to insure that students attain at least a specified minimal level of achievement and because such standards of achievement are well defined.

[4] The median age of veterans enrolled in the College in the winter quarter, 1949, for example, was twenty-three.

MINIMAL LEVEL OF ACHIEVEMENT

A major problem for any educational institution is the level of achievement to be required of a particular student. Should a student be excused from a program of work if he has already demonstrated the minimal competence to be required of students? If he already has this minimal competence, is it making the best use of his time and the school's resources to require him to spend additional time in such a program? What should decide whether the student should continue to attend a course for which he has already demonstrated acceptable competence?

The comprehensive examination system at the University of Chicago permits a student to complete a requirement with a grade of D or higher. This means that a capable student must determine for himself whether he shall strive for a high or only for a passing grade. While this same decision is offered to students in other colleges, the consequences are different. If a student in the College is of the opinion that he already has the minimal competence necessary, he may elect to take the course and do all the work involved; he may decide to work independently and do only part of the course work; or he may do no course work at all in preparation for the comprehensive examination. In contrast to this, the usual college program demands that the student attend class regularly and do all the work required.

The placement committee conceded that a student who could satisfy the College examination requirements at time of entrance might profit to some extent from further work in the course or courses from which he was excused. On the other hand, since the minimal requirements were quite high, the committee doubted whether such attendance would constitute the best use of a student's time. The committee also recognized the possibility that such students might be poorly motivated and more likely to develop poor habits of work and study unless they were constantly challenged by more and more complex ideas. The specification of a minimal standard of achievement does seem to be defensible in connection with general education, where the attempt is to insure that each citizen will have at least a minimal competence in certain general fields. In a specialty it might be more justifiable to insist on maximum achievement and to have students take work even though they have already satisfied the minimal requirements. The point of view that students should continue to attend classes even though they can demonstrate attainment of the minimal requirements can be best defended if additional experiences are provided for such students to broaden their understanding of the field or to intensify their understanding by going deeper and deeper into some of the more complex aspects of the subject.

WELL-DEFINED STANDARDS OF ACHIEVEMENT

The assignment of course grades has always been a rule-of-thumb affair in institutions of higher education. The criteria used in grading have varied considerably from course to course and from instructor to instructor. Even the same instructor varies his standards from time to time. Very rarely has an instructor attempted to define the level of achievement that he will regard as passing. Even when lengthy and objective tests have been given, little has been done to give meaning to the various scores other than to describe their distributions.

For placement purposes it is not sufficient to describe score distributions. If a placement program is to be meaningful, it is necessary to have some definition of levels of competence as well as some stable techniques for determining when that competence has been achieved. It is imperative that there be some method of determining what score or pattern of scores is indicative of the minimal level of competence to be required.

Since comprehensive examinations have been used for nearly twenty years in the College of the University of Chicago, the problem of relating examination scores to standards of achievement has been given much attention. For some time the procedure was to set grades by reference to a normal distribution such that a definite proportion of the students received A, B, C, D, and F. More recently, attempts have been made to use such other criteria for setting grade standards as the pooling of instructors' judgments on the test performance to be required for each grade, anchoring test material from one examination to another, and setting absolute standards which continued from one examination to another.

The standards of achievement for the comprehensive examinations became the basis for setting the placement test standards. Since the test material for placement pur-

poses is selected from or is parallel to the comprehensive examinations, it is possible to determine whether a student's placement performance is the equivalent of a particular grade on the comprehensive examination. The faculty has decided that a student may be excused from a comprehensive examination requirement if his performance on a placement test is the equivalent of a C and, in some cases, a high D on the appropriate comprehensive examination.

The committee recognized that the exact nature of the placement program would be determined by the extent to which the academic program was well integrated and sequential and that this would be best determined when the objectives of the College as a whole and the specific courses were well defined. The development of the placement tests, in turn, helped to reveal a number of points at which the academic program was not sequential and where objectives were not clearly defined.

SEQUENTIAL ARRANGEMENT OF THE ACADEMIC PROGRAM

If a placement test program is used only to determine whether students have or have not already acquired the competence which particular courses seek to develop, the relationship among the courses need not even be considered. A broader conception of the functions of a placement program would be that of assessing the individual student's present development and of planning educational experiences which will contribute most to his further development. This broader conception requires that there be some over-all plan which integrates and establishes the sequence of various educational experiences.

In each of the major subject fields in the College a single staff has been responsible for the development of an integrated series of courses.[5] In most fields each course builds on the preceding course, and all are related to an over-all series of educational objectives. However, as the placement committee worked on the development of the placement tests, they became aware of a number of points at which the courses in a particular subject field were not sequential. They found gaps, unintentional overlap, and repetition of subject matter and objectives which were difficult to explain. The repeated planning of the placement tests has served to aid the instructional staff in identifying those points in the program which are not so well integrated and sequential as they might be.

[5] See, e.g., the description of the three-year social sciences program in Milton Singer, "The Social Science Program of the College of the University of Chicago," *Journal of General Education*, II, No. 3 (April, 1948), 251.

CLARITY OF EDUCATIONAL OBJECTIVES

Unless the specific outcomes of a course or subject have been defined, it is impossible to determine whether entering students have or have not already acquired what the course can give them. Since the objectives of a course indicate the ways in which an instructional staff believes that it can change the behavior of a group of students, the task of a placement program is to determine whether the students have already reached the levels and the varieties of competence which the course can develop. The definition of the objectives of a course or subject field enables one to specify the kinds of evidence necessary to determine whether students have reached the desired types of competence.

Each of the courses in the College has defined its objectives as a basis for the preparation of comprehensive examinations. These statements of objectives were of great value in planning the placement tests. Perhaps the problem of defining objectives can be clarified by an illustration. One of the course outlines indicated a series of literary works that the student was expected to read. The instructors made it clear that mere knowledge of these particular readings did not represent the the ends of the course and was not sufficient to warrant excusing the students from the course. They further made it clear that other comparable books might be substituted for the particular ones on this list. The faculty were using the reading materials as means rather than as ends, since they were seeking to develop certain skills of interpretation in students through the use of these materials. The placement test, then, had to be designed to secure evidence on the extent to which the students could interpret certain literary works through the application of the intellectual abilities and skills required in the course. The definitions had to be sufficiently clear to enable one to determine what some of the permanent outcomes of a course were expected to be and what equivalent types of experience might be sufficient to enable a student to satisfy the requirements. One value of the placement tests was, therefore, in stimulating the instructional staff to produce clearer and clearer definitions of the

outcomes of a course. These definitions also served to focus the attention of the instructional staff on some objectives which they regarded as important and desirable but which they did not, at present, believe were being satisfactorily achieved.

SPECIAL OPPORTUNITIES FOR LEARNING

Very early in its explorations the placement committee had to face the problem of what should be done with students whose scores were just below that chosen as the minimum grade for exemption from a comprehensive examination requirement. In the early years of use of placement tests it was recommended that all such cases be given special attention. Where it seemed clear that the students did have courses or training approximating that required in the College, they were excused from the particular examination requirement, although others with similar scores who had not taken "equivalent" courses elsewhere were held for the requirement. This, however, was regarded as a compromise measure. It is clear that when any standard is applied there must be a substantial number of students having borderline scores. These are students who have some, but not all, of the competence required. It would not seem fair to have such students spend a full year of work in a course because they missed a few points on a placement test. Experience with these borderline individuals has indicated that many of them have patterns of knowledge, skill, and ability such that they can complete the requirements in much less than the usual length of time.

It has been found possible for many such students to round out their competence in a field sufficiently to pass the comprehensive examination with relatively high grades by attending only certain sessions of the regular classes or by taking specially designed abbreviated courses. In individual cases it has been possible to give a student special guidance as to the books he should read, the specific classes he should attend, and the educational experiences he should acquire before taking the comprehensive examination. These have proved to be very satisfactory techniques and have enabled many students to move ahead at a rate commensurate with their competence.

The placement tests have also led the faculty to face the problem of what to do with students who are unusually deficient on a placement test. It was found that some students' knowledge, ability, and skill in a field were so meager that they were quite likely to fail the comprehensive examination if given only the regular instruction in a course. The placement tests made it possible to detect many of these students; this, in turn, led the faculty to provide deficiency and remedial classes for them. In some cases it was possible to have extra meetings of a class to give these students additional instruction and to help make clear many of the points they were not able to grasp at the regular pace of the course. Procedures such as these have tended to reduce the proportion of failures in the College.

If a student is to profit most effectively from the time that he spends in an educational program, it is necessary to insure that he begins his work at the proper point. This is especially necessary where the student leaves one type of school for another with a very different educational philosophy, curriculum, and pedagogical technique. If one is willing to grant the possibility that (*a*) students may acquire some of the competence stressed in educational programs through experiences outside the school; (*b*) a particular competence, though once attained, is not necessarily permanent; and (*c*) academic standards and course classifications may be different from one school to another, then one must have some misgivings about assessing the students' competence on the basis of the usual academic record or transcript. It therefore becomes evident that techniques must be devised for appraising the competence of a student at the time of entrance to a new school. Placement tests, if made carefully with due consideration for the relevant kinds of competence which a student may attain, can serve as the basis for assembling such evidence. We have here stated a number of principles and criteria by which a placement program can be organized and on the basis of which placement tests can be constructed. It is recognized that the educational and testing programs are closely interwoven and have many possible forms of interaction. As the educational program is clearly defined, it is possible to determine the tests and testing techniques which are most appropriate. When such tests have been devised and used, they help to determine whether the program is achieving the ends desired and at what points the program can be improved.

Science and the Liberal Arts

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THIS NEW body of knowledge called "science" has made a profound impression upon the minds and lives of laymen and scholars alike in recent years. But through these years, in spite of the recognized importance of science in life and literature, it has scarcely enjoyed more than a second-place position among the more classical and supposedly more cultural academic areas of the arts and the humanities. All too often the man of letters has been content to leave the subject matter of science to that peculiar individual, the scientist, to teach, to practice, and to enjoy.

Now, in 1949, a new day has dawned on a new generation of scholars, and with that dawn have come new horizons to scan and new frontiers to explore. These horizons are created by the *tools*, the *theories*, and the *applications* of science—the cyclotron, the atomic pile, the electron microscope; the fission of atoms, the mutations of cells, the isolation of viruses; the theories of relativity, quantum and wave mechanics, the expanding universe, the formation of the elements, and the evolution of the species; the synthesis of gasoline, fuel oil, fibers, plastics, antiseptics, anesthetics, vitamins, and hormones. On these new frontiers are to be found many new problems and possibilities of learning and of life—problems intensified by the impact of the theories and practices of modern science and technology. In many respects these are some of the most challenging, perplexing, and thrilling frontiers which man has ever pioneered.

Impressive as most of these discoveries of science have been in the past, it apparently required the dramatic release of atomic energy to bring the importance of the great literature and activity of science into sharp focus and to call for the consideration of a required course in science in the liberal-arts college curriculum. And now, in 1949, many of this new generation of scholars wish to consider science as a "must" in the academic training of the man of letters of tomorrow. This brings us to our main issue: "What shall be the nature of such a course?" Let us here discuss that topic in terms of (1) the course objectives, (2) the course content, (3) the course instruction, and (4) the problems that the introduction of such a course will raise.

A list of objectives may be formulated in answer to the question, "What should the student gain from science that will make him a happier, better-informed citizen of his community?" The answer, perhaps, runs as follows:

1. A student should have a knowledge of the evolutionary processes that have altered the organic and inorganic world over the eras of time. This gives him a valuable backdrop of history, as well as an era-time concept in which to frame his knowledge of present-day science.

2. A student should have a knowledge of the organic and physical world around him. This is almost mandatory for its basic value as well as for its philosophical import. He should be able to see from his science that he lives in a world which is ruled by natural law and order, and, as Tennyson said, "To search through all and find the law within the law." Further, he should be able to experience the pleasure and joy of being an educated man. The intimate knowledge of the natural world can release him from primitive taboos and superstitions and help to set him free, an enlightened and confident soul. As it was expressed in the words of Emerson, "He who knows what sweets and virtues are in the ground, the

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water, the plants and the leaves, and how to come at these enchantments is the rich and royal man."

3. A student should have an awareness of the impact of the new scientific developments upon social, economic, political, and religious problems. This is an all-essential item for the nonscience major because it leads him to an awareness of the necessity of solving the many new problems that science has intensified in the nonscience areas. For example, let him consider the social significance of such facts as these: Before the steel plow was invented, it took eight or nine men to raise enough food for ten, whereas now two can do it; the life-expectancy period has been almost doubled in the last eighty years; the natural resources and the new synthetics make a nation such as the United States practically independent of major imports from the rest of the world; the airplane has brought the Hindu and the Christian within a week-end trip of each other; and the atomic bomb has made it possible for a second-rate nation to wipe out the rest of the nations of the world.

4. The student should have an experience in the way that science solves problems. By this we mean a laboratory experience which gives him an insight into, and a confidence in working with, particles of matter which he cannot see and yet which, by their reactions and interactions, prove themselves to be the basic units upon which the theories of modern science are built.

5. A student should have training in the use of the scientific method; and, essentially, this is training to think. This training must be assumed to be present in any acceptable science course.

6. A student should have a perspective of what can be expected of science in the future. This is a part of being a better-informed citizen, but it is also a part of giving a student a vision of the potentialities of the future. This is essential in a wholesome educational philosophy and is a part of the answer to the question the little boy is supposed to have asked, "Daddy, how soon will I know as much as I don't know?" A perspective is all that can be expected of a beginner, but it gives him an idea of what to anticipate beyond the limits of his experience and a vocabulary to assist him in pushing back those horizons.

7. The student should be acquainted with some of the world's great scientific ideas. If paramount in great literature are great ideas, then it follows that there can be found in the field of science some of the world's great masterpieces of literature with which a student should be acquainted.

8. The student should have a conviction that science is power. Science has harnessed the waterfalls for power generators and electric lights; it has converted the mountains of iron ore into factories, ships, and machines; it has improved on nature's materials and has made many new products, such as synthetic rubber, plastics, medicines, and alloys; it has given us specifics for dreaded infections like gas gangrene, osteomyelitis, peritonitis, pneumonia, and blood poisoning; it is now at work on the manner and methods of fissioning of cells and of atoms to look for new possibilities of life and of energy. Such information should lead to a conviction of the power of this thing called "science" and how steps must be taken in an intelligent, informed manner to control properly the problems that arise as a result of this new power which man has. In this atomic era that is mandatory. Such a conviction is more nearly assured by an experience in the scientific field.

The first two of these objectives are basic and relate directly to subject matter, but the last six objectives relate to integration and give the "plus" to the acquisition of this body of knowledge. Paramount in all these objectives is the hope that the student will (1) begin to see man's place in this cosmic order, (2) recognize both the possibilities and the limitations of science, and (3) realize that the mind that finds these facts and conceives theories and laws of science is still greater than the sciences themselves.

In considering the choice of subject matter, the planner of a liberal program in the sciences should not hesitate to cross subject-matter lines within the general field of science. Indeed, where interrelations between sciences exist, as when the evidence for a given theory comes from both physics and chemistry, these should be treated together. Moreover, within the limits imposed by the canons of sound and scholarly presentation, there should be no hesitation in crossing the lines between the sciences, on the one hand, and the humanities and social studies, on the other, where such integration is fruitful. Thus, where philosophical matters can throw light on scientific method and where, by consultation with appropriate colleagues or by reading, one can check one's soundness, there is no reason why the useful philosophical matter should not be employed. In the same manner, where scientific discoveries have sig-

nificance to the social scientist or where aspects of politics, economics, or sociology are significant to an understanding of scientific discovery, these significances are proper subject matter for a liberal program in science.

In choosing from within the large area so defined, the course objectives should be the criteria for choice. Whatever subject matter is chosen should then be woven into a firm fabric of a simple, understandable, continually repeating pattern of fact, hypothesis, experiment, and theory. That is, the subject matter should be so organized and presented that the conclusions of science do not appear as something fallen from the skies. They should, instead, be visible to the student as the product of a process of inquiry in which fact and idea, data and theory, hypotheses and verification, all play their typical roles. By this means, content and method, instead of being falsely abstracted from each other, are kept in relation. The student receives experience in the way science solves its problems, and some training in the use of the scientific method in a context of real content and exemplification which gives meaning to generalizations about method.

In general, the first two objectives suggest the main framework of the course content; they are:

1. A knowledge of the evolutionary processes that have altered the organic and inorganic world over the eras of time
2. A knowledge of the nature of the organic and physical world

The other objectives become the essential elements that direct the choice of the content material to be taught and the integration to be hoped for; they are:

3. An awareness of the impact of the new scientific developments upon social, economic, political, and religious problems
4. An experience in the way that science solves problems
5. A training in the use of the scientific method
6. A perspective of what can be expected of science
7. An acquaintance with some of the world's great ideas
8. A conviction that science is power

The length of such a course will depend somewhat upon the amount of time that can be made available without disturbing the balance of the curriculum. On the basis of the wealth of subject matter in the sciences and the importance of the objectives described above, it seems desirable to devote a two-year study of four to five hours a week to this program. The first year should be devoted to the physical sciences, since many of the fundamentals in this field are necessary in the study of the biological sciences. The second year's program can lead off easily from organic chemistry into the wealth of material in biochemistry, biology, physiology, bacteriology, genetics, and possibly psychology. Much of this same idea is expressed by the description of the Stephens College program as presented by Professor Van Deventer,[1] except that he seems to prefer to present the biological sciences first—that point is debatable.

A discussion of the specific subject matter for this course should be the topic of another symposium.

There is as yet no one established method of instruction in such a course. There are some strong proponents of the historical approach; others urge the case-method approach; and still others the more classical lecture-laboratory or the lecture-demonstration system. All have certain merits. A discussion of the methods of the course instruction might also be the topic of another symposium; we might simply state here the criterion for the choice of the method, namely, that method of teaching is good which makes it possible to realize these objectives in a thrilling and inspiring manner. Actually, the choice of method will depend to a great extent upon the interests of the teacher and the facilities that he has available. In fact, the success of this course probably depends as much upon the quality of instruction as upon all other factors combined.

There are several problems that must be considered in the development of a required course in science, namely, administrative, instructional, financial, and educational.

Administrative.—The present administrative organization of colleges seems to be a formidable obstruction in the way of developing core courses. The present departmentalized procedure was originally devised for ease of administration of university areas; however, core courses cut across departmental lines and frequently across college lines in universities. That makes the problems all the more complicated. There was a time when there seemed to be a fairly clean-cut boundary between the sciences. Now this is no longer true. It

[1] W. C. Van Deventer, "The General Biology Course at Stephens College," *Science in a General Education*, ed. Earl. J. McGrath (Dubuque, Iowa: William C. Brown & Co., 1948), p. 112.

may be high time to reorganize college areas in terms of science areas, social-studies areas, humanities areas, etc., in order to (1) make possible more co-ordination, (2) eliminate artificial barriers, and (3) greatly facilitate the organization of core programs.

Instructional.—There are at least three instructional problems that can be predicted. In the first place, it is difficult to find an instructor properly prepared by way of academic training or interest to teach such a course. This is largely due to the fact that the present academic procedure is to departmentalize and, therefore, compartmentalize educational areas in the undergraduate work and continue such a procedure in the graduate work. There are men who can and will do this type of teaching, but they are difficult to find. The instructor of this course must not be one of the second-rate men of the science departments—there is frequently the temptation to assign to such a course the fellow who cannot be depended upon to do a good job in the standard courses. Often the man who is best fitted in breadth of training and interest to teach a core course is also the best teacher of the other areas for much the same reason.

Furthermore, for many schools, teachers must be found who can work with large classes successfully, particularly in lecture-demonstration. This takes a unique kind of individual, much different from that type which can teach the ordinary class of twenty to thirty students.

In the second place, a young instructor may very frequently be lost in the shuffle if he devotes his time to teaching such a course under the present departmentalized procedure and be lost sight of in so far as promotion in rank and salary is concerned. In some groups he may even "lose face" if he falls from grace to teach a core science course. In many academic areas where competition is keen for advancement, the man that gets the nod is the one who has become a scholar by concentration in his field.

In the third place, it is difficult to obtain enthusiastic faculty support for such core programs, since most of the faculty have been schooled in the departmental-compartmental type of education. Furthermore, there is usually more interest on the part of many faculty members or a department chairman in his subject-major student than in the casual student. It seems to be a very difficult and nearly useless venture for an administration to insist on a general-science course unless the science departments are enthusiastic about it. Interest in core courses can usually be aroused only after careful analysis of the objectives to be attained.

Financial difficulties.—Core courses merit an expenditure of sufficient funds to insure their success. In the sciences this requires construction of a new type of laboratory facility (which is not now available in most chemistry, biology, or physics laboratories), the purchase or construction of proper demonstration apparatus, and the availability of all the modern visual methods of education. The use of sound movies, such as those available through the Encyclopaedia Britannica Films, Inc., should be encouraged. The instructors should be encouraged to develop sound movies of their own, obtain new slides, and take numerous field trips. Library facilities may also have to be expanded.

Educational problems.—There are at least three educational problems that can be predicted. In the first place, a teacher must be able to decide between selecting a minimum amount of material and teaching it well or covering a large area of work in a superficial manner —the former is to be recommended, but the student should be given at least a perspective of the pattern of the whole subject-matter area. Furthermore, he must choose carefully in budgeting his time between teaching fundamentals and applications.

In the second place, there will be some students who will become interested in science as a result of such a course and wish to transfer into the regular science program. It should be possible for such a transfer to be made with the minimum loss of time, preferably by the medium of proficiency examinations.

Finally, there is the very real issue of attempting to interest the nonscience major in science; he may very likely be that student who has never been interested or "inclined" to science. An administrator must ask himself whether it is possible to teach successfully a course in science to such students and whether it is worth the time and energy required to solve the above problems in order to do so. At this point he should turn to the objectives outlined above to reassure himself of the merit of such work.

It should be noted that this problem of interesting students is not limited alone to the student who is not "inclined" to science but represents a general problem in education today in all areas. This problem in the sci-

ence area serves to point up the need of an approach to education in order to stimulate interest on the part of any student in any area; it must somehow teach a student to make a game out of the things which seem difficult and dull and uninteresting, in order that he may more effectively use his time and energy in any academic experience.

This is a major problem on almost every college campus in all areas. It is one which must be faced fairly by every instructor and every administrator who has anything to do with a course that is "required." Most college professors are probably guilty of a take-it-or-leave-it philosophy in their teaching. This problem should be given much more attention by college programs, even if no core courses are developed.

The requirement for the acquisition of basic, well-integrated scientific knowledge is such in this era that a liberal-arts program must include a suitable background in both the physical and biological sciences. The objectives of this science program are such that no longer are the few, separate, specialized courses in each departmental area of the present college or university organization entirely adequate. The means now recommended in several colleges to meet such objectives is by core courses in the physical sciences and the biological sciences or a combined general-science course. Such core courses do not seem to fit the present departmentalized college or university organization and may require administrators to consider reorganization of their colleges to give better integration not only with the core course in science but with core courses that are being developed in other areas.

The instruction problem is the most difficult one at the present time and will probably not be solved satisfactorily as long as liberal education is rigidly compartmentalized. The quality of instruction in this area and in all areas must be given serious consideration. The problem of expense is one which must be met for all areas to assure success. This brings us to the rather interesting and perhaps startling conclusion that a satisfactory solution of the problem involved in teaching a required course in science may also improve the teaching in the other courses in science and may stimulate the professors in other areas to "pluck the beams out of their own eyes."

The science-teaching problem is not a unique one—the same case can be developed for courses in the social studies and the humanities as for the sciences.

Plans for the integration of learning areas are some of the very interesting and challenging developments of the present era of education. I believe that the attending problems can be solved satisfactorily. In the solution, I believe, may be found also a better type of organization of a college administrative program and better methods and facilities for teaching all courses. It certainly points to a more comprehensive approach to the interpretation of the universe around us.

Progress Report on a Year's Work in General Education at Florida State University

W. HUGH STICKLER*

EXPLORATION OF the problems faced in planning a program of general education, the steps we took in an attempt to solve them at Florida State University during one academic year, and our realization that much remains to be done indicate that a report on these matters may have value for institutions presently engaged in general education programs and for those whose programs are still in the planning stage.

This institution—until May, 1947, the Florida State College for Women—has operated a program of general education since 1936. In September, 1936, required integrated courses were instituted in humanities, biological science, physical science, and social studies. Two additional courses of three quarter-hours each were required in history. Although each course operated under a chairman, no over-all leadership for the program was provided. Progress was uneven, and the faculty realized that, if general education was to be more than a slogan, further steps would have to be taken. After committee reports, the Faculty Senate took two actions in May, 1947. First, a general education requirement totaling seventy quarter-hours for each student was established as shown in the accompanying tabulation. Second, the Faculty Senate recommended the appointment of a chairman of General Education to co-ordinate the program.

Communication through language	15
Health and personal adjustment	8
Humanities	15
Social thought and institutions	15
Natural science	17
Total	70

The temporary organization devised to direct the program during the developmental period has proved eminently practicable. The chairman of General Education reports to the president of the university, but he does not have a budget for salaries, nor does he have line authority. He operates through the Council on General Education, which includes all the academic deans, the chairmen of the general courses, the director of the Test Service Bureau, the chairman of the Senate Curriculum Committee, the dean of Student Welfare, and the chairman of General Education, who acts as chairman of the council. Wide representation is important; for every candidate for the baccalaureate degree, regardless of his school or college, must fulfil the general education requirements.

The work of the council in formulating policy has been invaluable. Since its members represent every major instructional unit in the university, its decisions rest on such wide samplings that they are generally acceptable to the faculty as a whole. The council also serves as an effective instrument for the dissemination of information about the program.

The chairmen of the general courses have the primary responsibility for carrying out the policies formulated by the council. These chairmen should be selected with great care, since they set the tenor for their courses. We have tried to appoint only well-trained, experienced teachers with a definite gift for leadership. Recommendations for appointments of chairmen of the integrated courses are made by the chairman of General Education with the approval of the

* Chairman of General Education, Florida State University. The author acknowledges with gratitude the assistance of J. Paul Stoakes in the preparation of this article.

Council of Academic Deans. Appointments are made by the president.

During the developmental period of our program we are appointing the chairmen of the integrated courses for three-year periods. This trial period will give each chairman a chance to determine how well he fits into the program and whether he wants to continue in it. It will also give the administration a chance to observe the chairman's effectiveness in his work. Before September, 1950, the problem of chairman tenure will be reconsidered and a long-time policy established.

It is obvious that there are both advantages and disadvantages to so loose an organization—particularly as it applies to the office of the chairman of General Education—as that under which we have operated during the past year. Because such organization would probably not be desirable over a long period of time, the university administration is studying recommendations concerning the long-time organizational pattern under which the general education program should operate. Involved in the determination of a permanent organization are such questions as the title of the director of the program, his authority, and his budgetary needs. But during the developmental period a loose organization has its advantages. It provides time to think co-operatively and intensively about the kind of general education program needed to fit a particular institution before setting up a tightly defined organization to administer it.

A successful general education program must be based upon a careful study of pertinent literature, continuous research into the needs in one's own institution, observation and analysis of programs under way in other institutions, and the continuous counsel of scholars widely experienced in the field. We have tried systematically to employ all four of these resources at Florida State.

To facilitate faculty study of the literature of the general education movement, we have maintained in the university library during the past year a special shelf of "Suggested Faculty Readings in General Education." To encourage reference to these books, an annotated bibliography was distributed to each member of the faculty. At least half the books were in circulation at all times. In addition, the General Education Office duplicated and distributed pertinent magazine articles to the entire teaching staff at irregular intervals.

A study was begun on the characteristics of "The Students We Teach in the General Education Program at Florida State University," and a preliminary report was made available to the faculty. Research along this line will be continued.

The rapid growth of programs of general education and the variety of experiments being conducted in colleges and universities throughout the nation make it imperative that officers concerned with the administration of a general education program be provided with funds for travel to conferences and workshops, and for visits to other institutions. Perhaps our most important source of outside suggestions and criticism resulted from our appointment of Earl J. McGrath as consultant. His objective suggestions and criticisms during visits to our campus at various times have been invaluable. A consultant, widely informed and experienced, can be highly useful in comparing one program with another, in observing internal defects, and in pointing out areas needing investigation.

Among the more important projects of our Council on General Education during the past year were studies of the characteristics, opinions, and backgrounds of the students enrolled in the program; the formulation of a statement of objectives; and the preparation of a booklet to inform Freshmen about the program.

We believe that a general education program should be designed to meet the needs of the particular student body in which it functions. We have, therefore, spent considerable time in studying, by means of questionnaires and other devices, the characteristics of our students. The findings have been of substantial assistance, we believe, in putting us on the path to an effective program. A correlative study was an analysis of what Florida State students think of general education. These first studies have been highly experimental and tentative, but they have at least helped us define a number of problems meriting further investigation.

Early in its deliberations the council saw the need for a set of university-wide objectives for the program, to which a large majority of the faculty would subscribe. It was felt that such a set of objectives was needed, first of all, in order that the faculty might clarify its own thinking regarding the purposes of general education in its institution. Second, a definite statement of objectives would help us explain to students, parents, and the general public in Florida just what we are

attempting to accomplish. Third, such a statement was essential if we were to undertake any significant program of evaluation.

Over a six months' period the council and the faculty worked together on the statement of objectives. Faculty members were invited to submit individual statements of objectives for consideration by the council. About two hundred and fifty such statements were worked over, combined, condensed, refined, and distilled by the council. The resulting statement was discussed by the faculty in an open meeting, after which the council made further modifications and clarifications. When submitted in final form, it was adopted without a dissenting vote. The objectives which we have established have been democratically developed and represent the best thinking up to now of a large majority of our faculty. Needless to say, we plan to re-examine and, if necessary, to revise our statement of objectives from time to time.

Armed with information about the characteristics of our students and with a clear statement of the objectives of our general education program, the council next undertook the important task of orienting incoming Freshmen. Study of our students had indicated that Freshmen frequently do not understand why they must take the required courses. They often resent courses which, as they see it, do not contribute directly to the vocation for which they are preparing. Such negative attitudes constitute barriers for the staff. To break down these barriers we have instituted activities that we hope will favorably orient the student to his work in general education. Before arriving on the campus, each Freshman gets a copy of an attractive twenty-page booklet which describes in simple terms the philosophy and objectives of general education, discusses the various areas of the program, and the contributions which the program can make to the student's future career. When the Freshmen arrive on campus, the chairman of General Education speaks to them briefly about the program and answers their questions about it. At the first meeting of each general education class the instructor tries to explain how his particular course ties in with the general education program as a whole in its effort to develop "effective personal and family living and responsible citizenship in a democratic society."

Our general education activities for 1947–48 were climaxed with a workshop held during the first six-week session of the 1948 summer quarter. More than fifty faculty members were able to participate actively in the workshop on either a full-time or a part-time basis. The workshop experiences were of two types: general meetings and small group-work conferences in the various areas. Fifteen general meetings were scheduled during the six-week period. They dealt with the overall problems and were attended by all workshop participants. Thirty different speakers were heard, and five documentary films were projected. The president of the university delivered the opening and closing addresses. Eduard C. Lindeman, of the New York School of Social Work, spent two days with us, leading the discussion on "Social Trends and Their Significance for General Education." Mr. McGrath reported on the latest developments in general education elsewhere and conferred with individuals and small groups about specific area problems. A leader in the state legislature spoke on "What the State of Florida Expects of Its Universities." A prominent citizen spoke on the topic, "A Lay Citizen Looks at His State Universities." A leading minister discussed "General Education and the Good Life." Five of Florida's professional men presented a panel discussion on "The Professions and General Education." Other contributors to the general meetings were members of our own university faculty.

The second type of activity in the workshop consisted of intensive work on the courses in the various areas. Some courses had as few as two or three persons carrying on the intensive work, but others had as many as ten or twelve. In numerous small group-work conferences the staff had a chance to re-examine and revise the course objectives in terms of the university's objectives for the general education program as a whole. One textbook was completed. Curriculums were restudied, syllabi were prepared, evaluation materials were developed, teaching materials were assembled, bibliographies were developed, audiovisual materials were selected, and professional articles were prepared for publication. Last fall every general education integrated course had a recently revised syllabus to place in the hands of its students. Workshop participants rated their experiences highly. Many expressed the belief that future projects of a similar kind should be undertaken.

Such, then, are the principal experiences of the faculty at Florida State University during the past year in its attempt to improve its general education program. We feel that we have made some progress toward our goals, but we would be the first to proclaim the modesty of that advance. Our chief concern now is with the numerous and difficult problems still facing us. We are far from satisfied with the present status of our audiovisual and counseling services; with our clinical facilities in the communications area; with our working relationships with the high schools of Florida; with our in-service training programs; with the lack of courses in general education at the upper-class level. We need to know much more about the students whom we teach and how our general education program can be best adapted to their needs. We need further workshop experiences not only among ourselves but also with participants from other institutions. We need to develop effective ways of evaluating our individual courses and our program as a whole. We need to know what the program is doing for and to our students. We have, in fact, work for many years to come.

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